THE AMERICAN NEPTUNE

MARITIME HISTORY & ARTS

VOLUME SIXTY-ONE, NUMBER TWO SPRING 2001

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THE AMERICAN NEPTUNE

A Quarterly Journal of Maritime History and Arts

Table of Contents

Editor-in-Chief's Note 113
Proud Builders of Boston: The Hallowell Family Shipyard, 1635–1804
  Sandra L. Webber 115
The Question of Pre-Columbian Carib Sailing Canoes
  Michael F. Doran, Jason Andrew Smith, Christina West, and Michelle T. Meade 151
The *Mary Summers:* An Early Iron Steamer in America
  Charles E. Pearson, Stephen R. James Jr., and J. Barto Arnold III 163
At the Tip of the Spear: The U.S. Navy and the Spanish Civil War
  Adam B. Siegel 185
Human Friction in the British Naval Operational Intelligence Linkages:
  Bletchley Park–Portsmouth Command, 1942–44
  C. I. Hamilton 205
The *Charles H. Davis* (AGOR 5)/HMNZS *Tui:* A Ship's Story
  Carlyle H. Whipple 221

Notices

Conference: Nathaniel Bowditch and the Art and Science of Navigation, 1802–2002 233
Obituary: David Beers Quinn 234

Book Reviews

Roger C. Smith, *The Maritime Heritage of the Cayman Islands*
  Paul E. Hoffman 237
Roderich Ptak, *China's Seaborne Trade with South and Southeast Asia (1200–1750)*
  Dian Murray 238
Alexander Boyd Hawes, *Off Soundings: Aspects of the Maritime History of Rhode Island*
  Robert Lloyd Webb 239
Alex Calder, Jonathan Lamb, and Bridget Orr, eds., *Voyages and Beaches: Pacific Encounters, 1769–1840*
  Frank Broeze 240

Joan Druett, *Rough Medicine: Surgeons at Sea in the Age of Sail*
Harold D. Langley 242
Frank Mackey, *Steamboat Connections: Montreal to Upper Canada, 1816–1843*
Walter Lewis 243
William Henry Flayhart III, *The American Line, 1871–1902*
Robin H. Wyllie 244
T. H. Baughman, *Pilgrims on the Ice: Robert Falcon Scott's First Antarctic Expedition*
E. Jeffrey Stann 245
Al Miller, *Tin Stackers: The History of the Pittsburgh Steamship Company*
Jerome K. Laurent 246
Eric C. B. Lee, comp., *The Cruiser Experience: Life Aboard Royal Navy Cruisers during World War Two*
Andrew Horrall 247
Richard F. Newcomb, *Abandon Ship!: The Saga of the USS* Indianapolis, *the Navy's Greatest Sea Disaster*
Jonathan Utley 248

~ SHORTER NOTICES ~

by Briton C. Busch

Justin M. Ruhge, *Maritime Tragedies on the Santa Barbara Channel: A History of Shipwrecks in Fog and Storms from Point Sal to Point Mugu* 251
D. K. Brown, *"Nelson" to "Vanguard": Warship Design and Development, 1923–1945* 251
Barry M. Gough, *HMCS* Haida: *Battle Ensign Flying* 251
Gerhard Simonsen, *Verschollen im Nordatlantik: Der Rätselhafte Untergang des Deutschen LASH-Carriers* München 252

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ON THE COVER

The Ship Bethel (ca. 1748) by an unknown artist. This painting in oil on canvas represents one of the ships that was probably produced by the Hallowell family, according to maritime historian John Millar, and was also perhaps the first clearly indentified American ship to have its portrait painted. For a discussion of the Hallowell shipbuilding dynasty, see the article that begins on page 115. This cover image appears through the courtesy of the Massachusetts Historical Society, Boston, Massachusetts.

EDITOR-IN-CHIEF'S NOTE

In a way, all of us concerned with maritime history and the arts are "sea hunters." We continue to explore the sometimes murky depths of our subject and its many and manifold themes, and at the end we usually appreciate that we have not sounded to the bottom, as it were, but have a very good idea about where the navigable channel leads us to safe havens or distant seas. I have always been a bit suspicious of those who have the last word, or those who pose as experts in the field. It has always been a revelation to me to attend the annual meeting of the North American Society for Oceanic History, for there sooner or later the great minds of the profession come to share their points of view and to offer up new insights into what they are examining. From this audience, a question will arise and before long an authentic answer will be offered, perhaps the result of a lifetime's work in the subject under examination. As this editorial is being written, NASOH is meeting in Hawaii, and the program is on mainly Pacific Ocean and littoral themes—another example of the delightful eclecticism and all encompassing fields of interests of the membership of this outstanding organization. For membership details, please write to the membership secretary, Virginia Steele Wood, at the Library of Congress in Washington, D.C. 20540.

At its last meeting, NASOH awarded its highest distinction, the Jack Bauer Award, to Professor Briton C. Busch, for his outstanding contributions to the profession and his assistance to NASOH, of which he is a past president. To *American Neptune* readers, he is best known as the author of our Shorter Notices, the indispensable reports on little-known but vitally important books, the riverine tributaries of our main currents.

In previous editorials, I have talked about storms, perfect and otherwise. We now seem to be in the age of extreme sports. One of the most extreme sports is that of ocean racing, and in North American waters, we have a variant of this in the form of the circumnavigation of Vancouver Island. The event is called the Cadillac Van Isle 360 International Yacht Race. It begins and ends in my old home port of Victoria. There are some ten legs of the race, and the most dangerous, as the events of last June attested, is the 138 nautical miles down the west coast of the island from Winter Harbour to Ucluelet. This treacherous patch is well known in the history of the race, and in one year a fierce fifty-knot gust battered the fleet there, doing much damage and forcing officials to call the race at that point. In 2001, the *3D,* a 31-foot trimaran skippered by David Miller of Seattle, a former shipwright and experienced sailor, flipped. His crew had just hauled down a big spinnaker and were changing to a jib, and with too much sail out the boat skidded then broached in a trough of a heavy wave. For a long day and night, as everyone was slowly getting hypothermic, they waited. The Canadian long-range patrol aircraft *Aurora,* stacked with electronic equipment, picked them up by radar. A sonobuoy was dropped, the *Aurora* hailed a passing fishing vessel, the Polish factory ship *Kolias,* and before long the men of *3D* were safe in the Canadian forces base Comox, beneficiaries of Canadian rescue services. A Vancouver reporter announced that there were two "lessons learned": first, outfit your vessel with a modern emergency beacon and, second, never doubt the ability of the Canadian forces to rescue distressed mariners. The last point needs reemphasis, because Canadian forces often cry out for the very best of equipment and do not always receive them. Charges of criminal negligence ought to be brought against government ministers and committees responsible for such a state of affairs. Commendation must also be made to the Polish fishermen who effected the rescue from truly treacherous seas.

Speaking of Pacific waters, among our many book reviews and notices is a book entitled *Voyages and Beaches.* This was reviewed by Frank Broeze, who died recently. A past president of the International Commission of Maritime History, he was an outstanding historian who rewrote the maritime history of Australia and therefore changed for the better our understanding of world maritime history. He was a professor of history at the University of Western Australia. We are sad at his passing, and we recognize him for his review published here, perhaps his final contribution in an outstanding career.

BARRY GOUGH
Wilfrid Laurier University
Waterloo, Ontario

PROUD BUILDERS OF BOSTON:

THE HALLOWELL FAMILY SHIPYARD, 1635–1804

by Sandra L. Webber

Boston was the shipping and shipbuilding capital of North America from shortly after the town's founding in 1630 until the middle of the eighteenth century. Despite the preeminence of shipbuilding in early Massachusetts Bay and the many early shipwrights named in local histories, comprehensive chronicles of individual colonial shipyards are rare. Most shipbuilding profiles cover nineteenth- or twentieth-century businesses, although some of these yards had roots in the early federal period. Seventeenth- and eighteenth-century shipbuilding data are scattered far and wide, demanding large investments in time to gather and interpret the material. Because of this inaccessibility, the important contributions of many colonial shipwrights have gone unrecognized or have not been fully appreciated.

The art of ship design and construction was perpetuated, as were most colonial trades, by the apprenticeship system, with entire families sometimes becoming involved in shipbuilding. Although itinerancy and relocation were normal, a number of Massachusetts Bay families evolved into shipbuilding dynasties, maintaining the same shipyard for generations. The Hallowells stand out among many excellent Massachusetts builders as perhaps the most influential shipwright family in colonial Boston. Their continuously operated yard began in the 1630s, and by the mid-eighteenth century, their professional reputation made them the most famous shipbuilders in Boston. At its zenith, the Hallowell yard was responsible for launching between twelve and twenty percent of Boston's total annual tonnage, including some of Massachusetts Bay's most famous vessels. At the height of their fame, the Hallowells also led unsuccessful attempts to reverse the spiraling decline of Boston manufacturing, including shipbuilding. The selection of the Hallowell yard for study was fortunate, for the family members were both prominent and aware enough of their own part in history to

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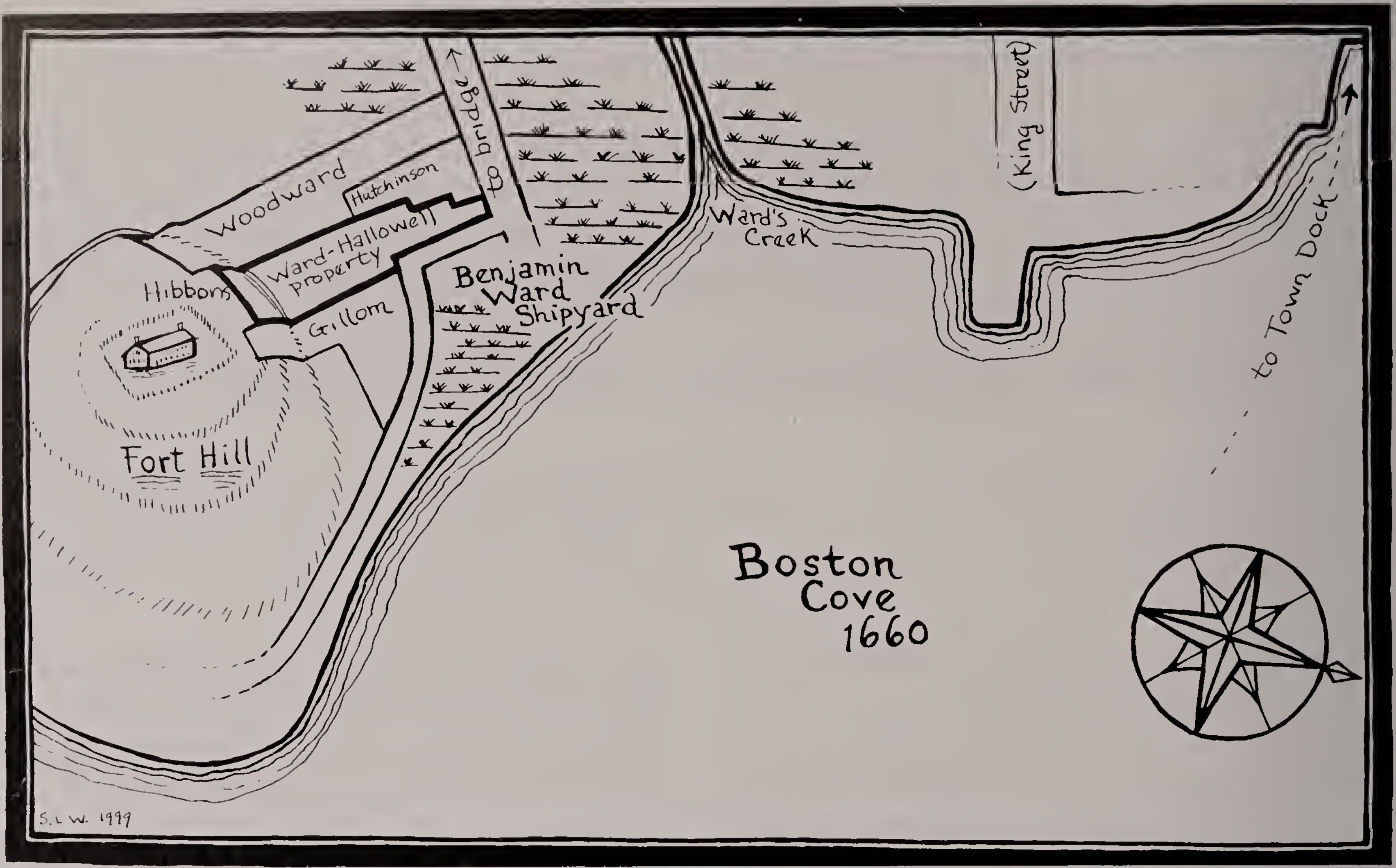
Sandra Webber is a conservator of paintings with the Williamstown Art Conservation Center and lecturer in the Williams College Graduate Art History Program. She holds a B.F.A. from the Massachusetts College of Art and received her graduate training at the Center for Conservation and Technical Studies at the Fogg Art Museum at Harvard University. In 1999, she headed a team of conservators who performed technical examinations, materials' research, and treatments on the Connecticut Historical Society's tavern sign collection for an exhibition and comprehensive catalogue. She is currently working on several art historical-technical projects, and continuing her research on the life of Benjamin Hallowell (1725–99), mariner, customs official, and loyalist.



Boston Cove between Fort Hill and the town dock around 1660. This was drawn by Sandra Webber and based on Samuel C. Clough's and George Lamb's interpretive maps of the "Book of Possessions," family deeds, and court documents. Courtesy of Sandra Webber.

have left a substantial trail of evidence. Their business and family chronicle is particularly rewarding because it spans the entire colonial period, allowing their endeavors to be paralleled with the history of shipbuilding in Boston. As hard-working leaders in the maritime community, their strong-minded advocacy of various issues relating to their waterfront domain generated numerous and valuable documents. Surviving shipping records, town and state archives, probate and civil court papers, real estate transactions, and family documents reveal the Hallowells' influence in town affairs, their status as merchant shippers and land speculators, and their activities as shipbuilders. The Hallowell shipwrights emerge as forceful and colorful individuals when their additional business and community activities are examined in conjunction with their shipyard's technical history. Provincial and international politics, town appointments, and activities surrounding their waterfront estate create a picture of the sometimes uncertain environment in which they lived and worked. The family's fortune follows the fluctuations of Massachusetts Bay commerce and reveals the intimate relationship between shipbuilding and Boston's economy. Their reputation has already given the Hallowells a place in maritime history not accorded to many early American builders.

This study will provide a more in-depth view of their shipbuilding within the context of the industry in Boston. Specific events are highlighted that not only bring this dynamic family to life, but impart a sense of the contributions made by the Hallowells to Boston's maritime economy.

"The Very Mart of the Land"

Boston's emergence as the central trading port of the colonies stemmed from the natural maritime advantages of a defensible site and a large deep-water harbor, combined with the industry of its inhabitants and a variety of merchantable commodities. New Englanders quickly realized their commercial potential by gaining control of the transport of their own commodities as well as those of their trading partners. The fishing industry provided their greatest native staple, followed closely by numerous timber products. In an effort to facilitate the maritime industries that became the backbone of the colony's economic life, shipwrights were recruited and sent to Massachusetts Bay from England as early as 1629. The demand for resident shipbuilding talent increased with the town's growing trade, thus advancing the Boston area as the most important center for the production of both fishing and trading vessels. The English Civil War in the 1640s severely slowed emigration and reduced trade from Britain, throwing the colonists on their own financial devices and expanding Massachusetts Bay's shipbuilding. New England's increased trade with West Indian and continental European ports and the continuous losses and damages at sea caused by weather, pirates, and war escalated the need for locally built vessels and repairs. With freight charges being a considerable burden, colonial merchants also sought to build their own vessels, adding carriage and the vessel itself as "saleable commodities." Vessel sales and shares were already a facet of the international trading undertaken by Boston merchants and mariners as early as the 1640s, according to William Aspinwall's notarial records. In his 1654 published description of Boston, Captain Edward Johnson commented that "A Good store of shipping is here yearly built, and some very fair ones; both Tar and Mastes the country affords from its own soil. . . . this Town is the very Mart of the Land, French, Portugalls and Dutch, come hither for Trafficke."[1]

During the mid-1660s, there were three hundred New England vessels involved in foreign trade and some 1,300 smaller craft associated with fishing. In 1665, an estimate of Massachusetts Bay shipping employed in the colony's foreign trade was forwarded to England by the General Court, which listed eighty vessels measuring from thirty to forty tons, forty measuring from forty to one hundred tons, and twelve rated above one hundred tons burden. The legislature, in quantifying only the 132 largest craft, may have excluded many smaller vessels that were surprisingly making oceangoing deliveries, probably as an extension of the fishing industry. A considerable number of additional vessels were built for sale to West Indian merchants. This growing fleet, combined with the demands of the local fishing industry, provided ample work for shipbuilders and widened their client base with overseas sales. The expanding New England shipping and shipbuilding trades forced both the colonial and English governments to implement new regulations. By 1640, several Massachusetts Bay towns allowed shipwrights to take timber on commonly held land, taxing them on newly completed tonnage to compensate for the removed trees. Beginning in 1668, all white pine trees over twenty-four inches in diameter at three feet from the ground were supposed to be reserved for government use, primarily as a mast supply for the Royal Navy. A regular traffic in mast trees, originally centered on the Piscataqua River near Portsmouth, New Hampshire, began in 1652 and quickly developed into a separate and lucrative industry. During the eighteenth century, specially designed 500- to 1000-ton ships, each loaded with forty to one hundred masts, were often accompanied by an armed escort on their way to England's shipyards.[2]

Several attempts to organize and regulate the Massachusetts Bay shipbuilding industry occurred during the seventeenth century. A law passed in 1641, structured on the English method of inspection, gave power to the General Court to appoint surveyors to review a ship's construction on request from an owner. In 1644, an Act of Incorporation was brought forward for a shipwright association that appears to have been unsuccessful, although coopers and shoemakers achieved similar associations by 1648. Twenty years later, however, Boston's master shipbuilders, concerned for their reputations in a community where anyone with a modicum of experience could and did build vessels, petitioned the legislature, stating that "Diverse unskillful persons pretending to be shipwrights do build ships and other vessels . . . which are defective, both in matter and form, to the great prejudice of the merchants and owners and the danger of men's lives at sea." The General Court then ordered a five-man committee, headed by Captain Edward Johnson, to draw up suitable laws regulating shipbuilding. Apparently no proposals emerged from this offer of self-governance, so quality-control inspections proceeded as before, on an as-needed basis. Perhaps Boston's shipwrights were merely protecting their territory against an influx of new ship carpenters, and in the end were unwilling to accept tighter restrictions on themselves. In such a competitive field, with knowledgeable buyers, poor workmanship would have been recognized and condemned. Since there were only occasional problems, the industry may not have been ready for more stringent laws. A regulatory act of the 1690s, which continued the 1641 policy of peer review to control quality, placed the requirement for phased inspections on the builder and imposed fines that accumulated daily until faults were corrected. England repealed this law in 1700, citing it as an unnecessary charge and restraint upon shipbuilding.[3]

The success of New England's shipping drew its first critical attention from England in 1669. While noting the industry and ability of New Englanders in shipbuilding and seamanship, Sir Thomas Child warned that "there is nothing more prejudicial and in prospect more dangerous to any mother-kingdom, than the increase of shipping in her colonies." The success of colonial trade, together with American merchants' continued resistance to the British mercantile regulations, would in the end be a contributing factor to America's revolution. However, England chose to do nothing then or later to prevent the shipbuilding industry from flourishing, despite repeated alarms. In 1676, royal agent Edward Randolph reported that there were "about thirty master-builders of ships [in New England]" and that "good ships are built for four pounds the tonne." It was also common for New England shipwrights to receive about thirty orders a year from English merchants, although foreign wars often greatly reduced these commissions. By 1676, the number of vessels built and owned by New Englanders totaled an amazing 730 and, while four hundred of these ranged from thirty to one hundred tons burden, there were thirty ships in the category of one hundred to 250 tons.[4]

A ship register for Massachusetts Bay covering the years 1687 to 1714 provides a wealth of information that has been analyzed by a number of historians. During this time span, Boston steadily increased its portion of all vessels built in the province from thirty-two to nearly fifty percent, with Massachusetts Bay launching ninety-one percent of all North American vessels. Of the total 1,332 vessels listed measuring thirty or more tons, 239 were built for merchants in either England or the West Indies. Although the colony's production of several mid-size vessel types declined or remained level during this period, both sloop and ship production tripled, with Boston taking the lead in building the larger ships. After 1698, Massachusetts Bay investors owned over eighty-eight percent of the province's own shipping, with Boston merchants owning nearly seventy percent of this total. Bostonians were also invested in over twenty-three percent of West Indian vessels, as well as a portion of the British merchant fleet. Around 1700, one-third of Boston's adult males, including nine shipwrights, were listed as principal shipowners, and broad and fluid shareholding continued to be the normal practice.[5]

Following the 1713 Utrecht Peace Treaty, a number of commercial changes affected the trade patterns and shipbuilding practices of the colonists. The French West Indies' fish market opened up in 1717, which, together with Britain's recent acquisition of Newfoundland, allowed New England to increase its offshore bank fishery both profitably and safely. The first Massachusetts schooners were built on Cape Ann around this time and quickly became the more popular fore-and-aft rig, replacing the earlier ketch.

Quite large sloops handled the constant flow of coastal fuel-wood deliveries, whaling, and voyages to the West Indies. The larger schooners and square-rigged vessels including ships, brigs, and snows, provided the tonnage for most transatlantic routes. In 1717, Massachusetts's commerce involved 492 vessels measuring 25,406 tons and employed 3,493 seamen. At the same time, five to six thousand men and one thousand sailing vessels worked in the fisheries. Boston customs surveyor Archibald Cummings reported that, during the year ending in April 1717, Boston built 160 vessels totaling eight thousand tons. In 1714, Boston merchants improved their harbor's level of accessibility by completing Long Wharf, which extended 1,743 feet out into the deep water, thereby allowing the direct unloading of even the largest vessels. The north side of the wharf's 104-foot width accommodated warehouses and stores, and Minot's T boasted a freshwater well for direct service to vessels. Long Wharf, justly famous among mariners, helped Boston retain its trading supremacy, and the first lighthouse on the continent, completed at the entrance of Boston Harbor in 1716, further improved navigation into the port.[6]

Again in the 1720s, England took notice of New England's shipping and shipbuilding strength. In 1721, the Board of Trade reported to the king that "shipbuilding was the most important and best-managed line of manufacture in Boston." In 1724, London's shipwrights complained to the Lords of Trade that so many shipwrights had gone to New England there were not enough men remaining to carry on the work at home. They stated that New England shipwrights, who were building for a lower cost per ton, had built seven hundred sailing vessels between 1713 and 1720, and as many or more during the following four years. Although severe measures were advocated by the English shipwrights to control the colonial industry, none was ever implemented by Parliament, which may have considered the recommendations too harsh or bypassed them in favor of protecting the more sacred British wool industry. In consequence, by 1730, one-sixth of England's merchant fleet was American-built. The level and importance of Boston's trade can be seen in the North American shipping traffic statistics for the period between 1729 and 1730, when 533 vessels entered and 628 vessels cleared the port. While there were many reasons for this discrepancy, including smuggling and changes in return ports, it is usually taken to reflect the number of vessels sold abroad. Places like Spain, Portugal, England, and the British West Indies purchased vessels from New England, and this helped the colonies balance their trade debt with England's merchants. At this date, Boston shipping accounted for roughly fifty percent of the total number of vessels entering and clearing all North American ports. Boston's traffic with Canada, the other continental colonies, and the British Isles amounted to about sixty percent of the totals for each of those destinations. Boston also held roughly forty-two percent of the colonial trade with the Mediterranean ports. This extremely active merchant marine kept the many Boston shipyards busy and presented the perfect opportunity to sell vessels to domestic and foreign trading partners.[7]

While Boston's merchant shipping industry continued to expand in the mid-eighteenth century, the viability of shipbuilding in the provincial capital began to decline. The higher cost of building in Boston was caused by elevated local taxes, higher wages, and the increasing cost of importing timber from farther afield. While Massachusetts maintained her shipbuilding prowess, relocation of the industry to such outlying ports as Newbury drove many Boston yards into depression and bankruptcy during the late colonial period. The decline continued through the Revolutionary War into the late 1780s. However, by the 1790s registered tonnage statistics and business directories indicate a rapid resurgence of both shipping and shipbuilding in Boston. Registered national merchant tonnage grew seven-fold between 1788 and 1807, increasing forty-two percent between 1797 and 1807 alone. Of the total 848,306 United States tons registered in 1807, 310,309 tons were from Massachusetts. Between the years 1789 and 1796, the Boston directories record a three- to four-fold increase among tradesmen related to shipbuilding, including caulkers, sailmakers, riggers, and ropemakers, while the number of shipwrights and ship carpenters more than doubled from twenty-three to fifty-one. However, it would not be until the 1840s, when deep-water locations were needed to accommodate the much larger vessels that were desired, that Boston underwent a major, though short-lived, boom in its shipbuilding industry.[8]

The Hallowell shipyard in the South End of Boston, no longer extant in the nineteenth century, operated for nearly 140 years under continuous family management. After surviving for four generations, a combination of commercial conditions and family decisions brought an end to the family operation in 1773 although, due to political events, the property did not pass out of their possession until 1804. The story of the family shipyard opens with the arrival of Benjamin Ward, one of Boston's earliest shipbuilders and the father-in-law of the first Hallowell shipwright in Boston.

Launching a Legacy, Challenging Fate

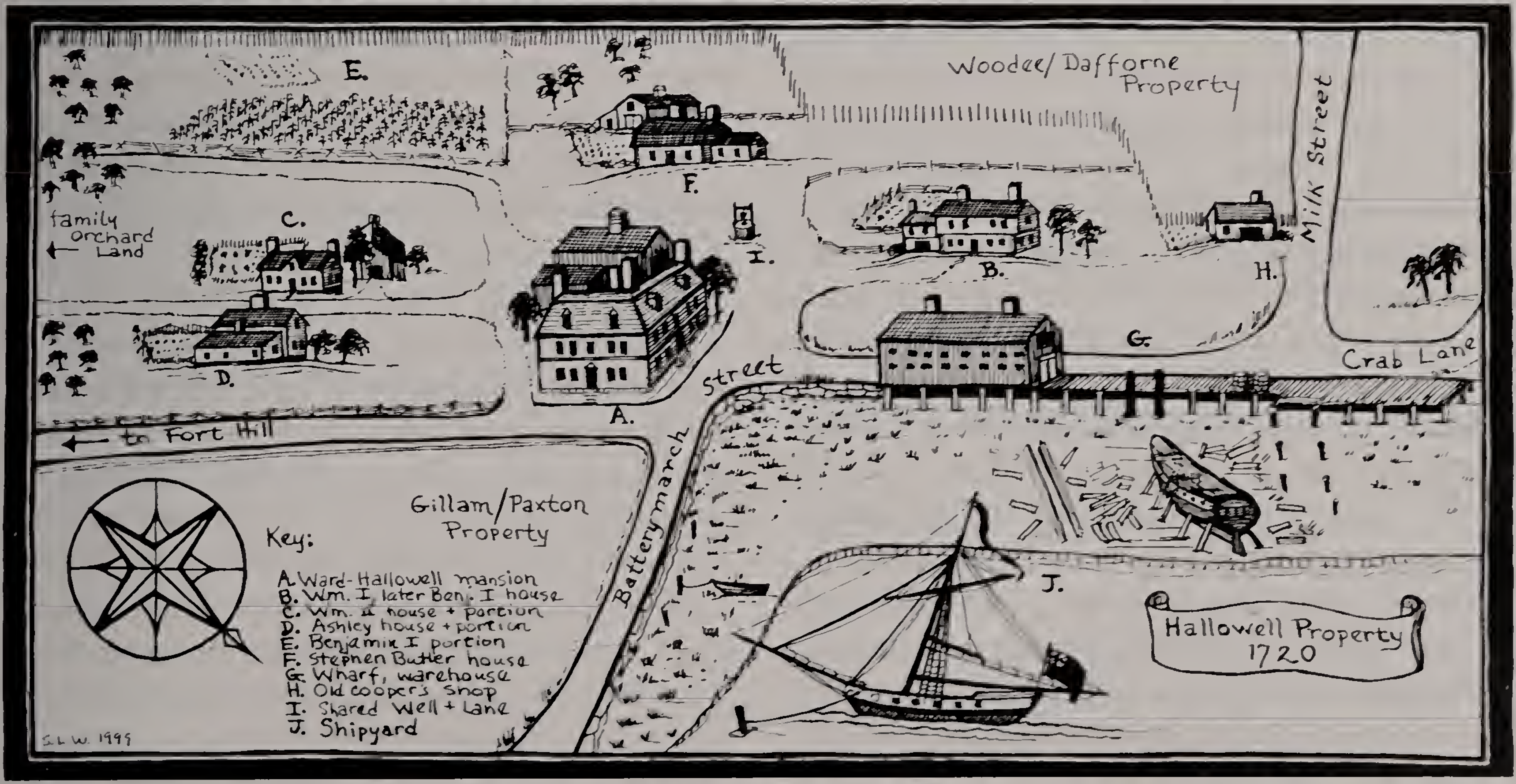
During the early settlement of Salem and Boston by the Massachusetts Bay Company, the need for shipwrights to build fishing and trading vessels for the colony was quickly recognized and resolved. Although ship and boat building had occurred in scattered locations along the North American coastline between 1607 and 1629, there had been no previous attempt to establish a New England-based shipbuilding industry. The six shipwrights sent by the company in 1629, headed by Robert Moulton, were the vanguard of a generation of British emigrant talent that arrived during the next ten years. Given favorable status in their new communities, they were provided with land adjoining coastal lowlands, either along harbor salt flats or river front areas. In the summer of 1629, fishing shallops, built using building supplies that accompanied the shipwrights, were paid for by shareholding contracts between the company and local merchants. Colony and town governments further encouraged this valuable trade by exempting shipwrights from military training, permitting them local timber harvesting rights, and giving tax advantages to all vessels involved in the fishing industry. These well-trained emigrant builders began the shipyards in Salem, Boston, Medford, Scituate, and the Merrimack River areas. During the 1630s, many shipbuilders began working along New England's coast, and by mid-decade had launched ships as large as one hundred to three hundred tons with support from company financiers in England and wealthy colonial merchants.[9]

Early land and church records indicate that Boston had a number of active ship carpenters by the mid-1630s, among whom were Benjamin Gillam, Thomas Hasard, Matthew Chafey, John Sweete, Walter Merry, Nehemiah Bourne, and Benjamin Ward. Although the first shipwrights sent to Salem with Robert Moulton remain tantalizingly unidentified, no evidence substantiates Benjamin Ward as one of this revered group. Benjamin Ward and his stepson, Stephen Butler, apparently departed from the parish of St. Mary's Whitechapel in London, possibly having first migrated from the south-coastal county of Hampshire.[10] Unfortunately, the dates of their departure and their shipping passage have been lost. British emigrants were not systematically recorded until 1635 and relatively few passenger lists survive for the first great wave of emigration between 1629 and 1640. The Ward family arrived in the early 1630s, perhaps in 1632, with noted builder William Stephens, who worked in Boston until 1636 before relocating to Salem, or perhaps in 1633/4 with their future neighbor and shipwright Benjamin Gillam.[11]

By 1635, Benjamin Ward had settled in Boston with his wife, Mary Butler Ward, their young daughter Mary, and Stephen Butler, Mrs. Ward's son by her former husband. The Boston town records provide the first notice of Ward on 14 December 1635, when he was granted twelve acres of land in Muddy River (Roxbury) during the distribution of great meadow allotments to the "then inhabitants." Ward was not a wealthy newcomer, as four acres of meadow per family member were allowed for poorer inhabitants who had no cattle and who were likely to become church members.[12] This second grant implies

Ward was already living in Boston, a fact supported by the Book of Possessions, whose pages record the irregular-sized house and garden lots granted in Boston as early as the 1630s. Ward's property is listed as number 118 in the section "Lots on the North Side of Fort Hill," and described as a house on one acre near the town marsh. Ward's abutters included shipwright Benjamin Gillam to his east, William Hibbons on the south, Nathaniel Woodward to his west, and Edward Hutchinson and the marsh to his north. This long narrow lot fronted on what later became Milk Street, and widened as it headed southeast along Batterymarch Street toward Fort Hill. Land belonging to Hibbons and James Penn was taken in 1644 for the breastwork on this natural prominence, giving Fort Hill its name. Benjamin Ward and his wife joined the church on 6 June 1640, a prerequisite to participating in the early Puritan town government, and Ward became a freeman on 2 June 1641 along with fellow shipwright Nehemiah Bourne and 124 other male inhabitants.[13]

Benjamin Ward was certainly given his house lot with a view towards his craft, as was customary policy towards shipwright settlers. While the first keel laying of the shipyard is lost in obscurity, in April 1647 the town granted Ward permission to wharf his waterfront property. He obtained a two-year lease with an annual rent of three pounds (used to support the free schools) for use of one-eighth of the town marsh fronting 12½ rods by 5 rods (just over 206 feet x 82 feet) on his land and workhouse to the southeast. This implies an expansion of an existing operation, one perhaps already using the beach or flats in front of his property. "Not much land was needed for a shipyard because nine foot tidal shifts provided time to examine and repair the small merchant ships of the day on the ebb tide." The lease arrangement with the town ran in perpetuity after 1649, in conjunction with a 1641 colony ordinance giving upland cove estates fee simple ownership of their adjoining flats out to the shipping channel. In early 1648, Boston granted Ward and his Fort Hill neighbors permission to build a road, at their own expense, connecting their houses to Valentine Hill's bridge. In June 1654, this road was laid out between Henry Bridgman's house and Benjamin Ward's wharf,



Conjectural view of the Hallowell property around 1720. This was drawn by Sandra Webber and based on numerous family deeds and probate files. Courtesy of Sandra Webber.

with fill used in the marsh to create a straighter street, later named as part of Milk Street. Known by 1671 as Ward's Creek, this area of the marsh was an excellent shipyard site lying in a protected cove near the heart of the town's commercial district.[14] The property's value would be recognized and its boundaries defended by Ward's descendants during the span of their 170-year ownership.

Only glimpses of the earliest days of the shipyard and Benjamin Ward's life are available in scattered documents, including the inventory of his estate taken in January 1667, shortly after his death. A number of details indicate he was building small boats as well as sailing vessels and that he was also a merchant or shipping venturer, probably involved in the fishing trade. In a society where specie was often hard to come by and payment for services was partially contracted in trade commodities, diversity of business involvement afforded better opportunities for control and prosperity. Many shipwright families embraced a number of related occupations such as mariner, merchant, and shipper, which expanded their mercantile base and spread risk across several operations, while holding the proceeds within the family. At his death, Benjamin Ward owned a one-eighth share in the ketch *Guift* (worth £50) and a one-quarter share in the ketch *Endeavor* (worth £60), as well as one-third part of a lighter (valued at £12). Ketches from this time period, defined by hull type rather than rig, ranged from sixteen to over sixty tons and were probably two-masted, with double-ended hulls and single decks. Crew size to tonnage ratios indicate ketches were fore-and-aft rigged, which provided better handling for the return from offshore fishing, the likely use for these two vessels. In 1650, Ward's name appears on a ship's bill of disbursement for building a boat, but the stock remaining at the yard in 1667, including iron, oars, masts, poles, and plank, suggests he built sailing vessels as well. Both boatbuilder and shipwright were used in court and land documents to describe Ward's occupation; perhaps his work encompassed both branches of building, although by the next century each trade had evolved into a distinct industry.[15] Benjamin Ward's stepson, Stephen Butler (born ca. 1620), and his son-in-law William Hallowell (born 1625 and husband to Ward's daughter Mary), worked with him in the shipyard, each receiving one-quarter of the earnings.

William Hallowell most likely arrived in New England in the 1640s when in his mid-twenties, the common age of many male emigrants. An early nineteenth-century family tradition states this branch of the Hallowell family originated in the western county of Devonshire, England. Although emigration came to a standstill between 1640 and 1642 due to the English Civil War, deserting mariners and western county fishermen continued filtering into Massachusetts via Newfoundland, and small numbers of passengers began crossing to America again in 1648. It is estimated that sixteen percent of Massachusetts' earliest settlers came from the western counties of England, while higher percentages emigrated from both East Anglia and the counties surrounding London.[16]

Hallowell had likely completed training before coming to America, as trade apprenticeships began as early as the age of twelve or thirteen and were completed in four to seven years. Hallowell may have been a master builder when he arrived, or perhaps was one of thirty shipwrights who reportedly trained between 1646 and 1675 under Boston master builder Alexander Adams, who instituted a training program due to a shortage of colony shipwrights. Because settling in Boston was contingent upon being employed, Hallowell likely had connections with local artisans when he arrived. The town fathers not only were particular about the religious persuasion of newcomers, but were vigilant in removing unwanted burdens on the town's charity. Hallowell may have had an indenture arrangement with a shipyard owner, or had convinced a townsman to bond him until he found work in the harbor. It is tempting and logical to assume that Hallowell worked with Benjamin Ward prior to his marriage with the latter's daughter around 1651 or 1652. William Hallowell is first mentioned in Boston records with the birth of his daughter Mary and the death of his daughter Hannah in 1653. Sons William and Benjamin were born in 1654 and 1656 respectively, and Williams' wife, Mary Ward Hallowell, died in January 1657/8. Despite the fact that there were matchmaking discussions, he apparently never remarried, a somewhat unusual circumstance in colonial life. William Hallowell, who lived a long life, apparently devoted his energies to his trade and the business of protecting the family's shipyard legacy.[17]

The seventeenth-century family shipwrights probably trained quite a number of apprentices; however, only a few are traceable, and some are recorded in Benjamin Ward's tangled estate papers. John Vyall Jr. (born ca. 1646) was apprenticed for five years to Hallowell and also kept the shipyard's books during the later years of Ward's management. Beginning in the 1660s, Hallowell apparently trained his two sons, as they soon emerged as shipwrights in their own right. Timothy Thornton (born ca. 1650), who lived with Ward's family for four and a half years (1662/3–1667), may also have been indentured to Ward for shipbuilding experience. In 1658, Benjamin Ward bonded himself with the town on behalf of new inhabitant John Martin, although it is unknown if Martin then served Ward in any capacity. The Ward-Hallowell shipbuilding business was by all accounts successful. While Benjamin Ward was not among the extremely wealthy merchant class, he left an estate in late 1666 appraised at a respectable £940, much of whose value lay in real estate. The itemized list reads as follows:

A parcel of land before the house of his Son Holoway unto the Sea with the Shed	£40
3 dwelling houses with the yard Roome belonging to each of them	£450
The Orchard above the houses	£35
A Smith's Shop and a Coopers Shop	£20
12 Acres of Land at Muddy River	£24
A parcel of Land at Bilerica	£4
Wharves and Docks	£40

The individual items in this document yield clues about the nature and layout of this family compound. The relatively low value assigned to the land in Billerica probably indicates it was undeveloped, except for its conceivable use as a timber source. The meadowland at Muddy River may have been farmed by the family or, more likely, leased to a tenant farmer. William Hallowell sold this parcel in 1698, suggesting the family had no great interest in its use. The high value assigned to the three dwelling houses and their yards suggests at least some of these buildings were of consequence. In 1689, Benjamin Ward's former dwelling was described as a brick house, setting it above the average wood house of seventeenth-century Boston. This grouping also shows that several generations and households shared a legally undivided property, a fact that would cause serious repercussions among the inheritors.

The placement of William Hallowell's house provided the most convenient access to the waterfront workhouse and shipyard. The in-town orchard or garden was not unusual; by the eighteenth century, both were regular features of middle- to upper-class Boston mansions or dwelling houses. A smith shop was a common sight near any shipyard, as blacksmithing was an integral facet of shipbuilding, and during the eighteenth century, several Hallowell family blacksmiths fabricated hardware for the shipyard. The existence of a cooper's shop near the waterfront may point to the family's shipping interests, as barrels and hogsheads were constantly needed as containers. However, the Hallowells' wharfing rights also contained an easement allowing townspeople access to the waterside, which would have provided ready clients for such artisans as the blacksmith and cooper. The plural wharves and docks probably provided lading room for the family's shipping activities or indicated the shipyard had more than one space to build, repair, or moor vessels.[18]

Benjamin Ward died without a will, leaving the disposition of the estate to his widow and the court system. This regrettable oversight set in motion a spectacular legal battle between the Hallowells and Stephen Butler. Their dispute, which spanned the next eighteen years, strained the limits of colonial inheritance law and repeatedly engaged every accessible court within the jurisdiction. The Hallowells' tenacious pursuit of their cause was a curious mixture of self-serving legal maneuvering and a genuine pride in their own lineage and the stewardship of the property. Although partially correct in their Mosaic interpretation of colonial probate law, this alone hardly seems to justify the Hallowells' behavior in disregarding both Mary Ward's will and the conceivable rights of her son, Stephen Butler. The underlying culpability in this long, drawn-out litigation lies with the legal system, which was perhaps not yet sufficiently structured to handle such a case. The initial judgment may have been hastily given, but by allowing incessant appeals, the various courts continually contradicted one another, giving the litigants renewed opportunities for conflict. Whether either party was able to influence the verdicts deliberately or otherwise is not determinable; in such a close community as Boston, acquaintance with the two men might well have created bias during the proceedings. It seems unlikely the two families were on friendly terms, given the nature of the disagreement and their proximity to each other. This "troublesome case," as the General Court referred to it, materially affected both the shipyard and the two families. This contest also reveals a strong facet of the Hallowell family character, a reappearing trait of dauntlessness, which engaged them at this early date in a scenario closely resembling a morality play.

In May 1667, Mary Butler Ward, Benjamin's widow and estate administrator, petitioned to split the estate in two, but died before any court ruling on her request. Her will and the division were then approved simultaneously by the Suffolk County Court as the final settlement of her husband's estate. Stephen Butler was named executor and was also legatee of half the estate. The other half was bequeathed to the three Hallowell grandchildren, Mary, William, and Benjamin, when they came of age; their father William was to receive the benefit of the moiety until that time. Mrs. Ward's statement that she wrote her new will to keep peace in the family and to provide some inheritance for her son, Stephen, suggested serious family tensions existed. Before its first ruling, the court took depositions from neighbors, and most supported the equal division to be consistent with Benjamin Ward's own wishes. In light of future developments, one witness prophetically testified that Ward intended to make his younger grandson, Benjamin, his principal heir. In December 1667, court administrators divided the estate and William Hallowell immediately petitioned against the division on behalf of his children. During the April 1668 hearing, Hallowell claimed Mrs. Ward had no right to dispose of the estate outside of Ward's blood lineage, using an Old Testament reference (Numbers 27: 7–11) in his plea. In Hallowell's defense, new lands in Boston had become scarce and expensive; therefore suing for what he thought was his rightful legacy was a reasonable course of action. Also, widows were traditionally allowed one-third of an estate as a dower during their lifetimes, not the one-half Mary Ward devised to herself in order to benefit her son. Attempting to justify his right to part of Ward's property, Butler later claimed his mother's assets had materially added to the estate when she married Ward. The Hallowells, being Ward's only blood heirs, might have inherited the full estate had this been a straightforward probate case based solely on Benjamin Ward's intestate death. However, it was a testament to women's rights in the colony that Mrs. Ward had been assigned as sole administrator of her husband's estate and that her will was accepted as legally binding, at least for a while. The court rejected William Hallowell's challenge to the will's legality, but allowed him the choice of divisions. Hallowell chose Butler's portion, which was returned to Butler at the next session, following an appeal based on improvements. This perhaps should have been the final determination of the legal system, but the Hallowells, never fainthearted, were unwilling to accept defeat.

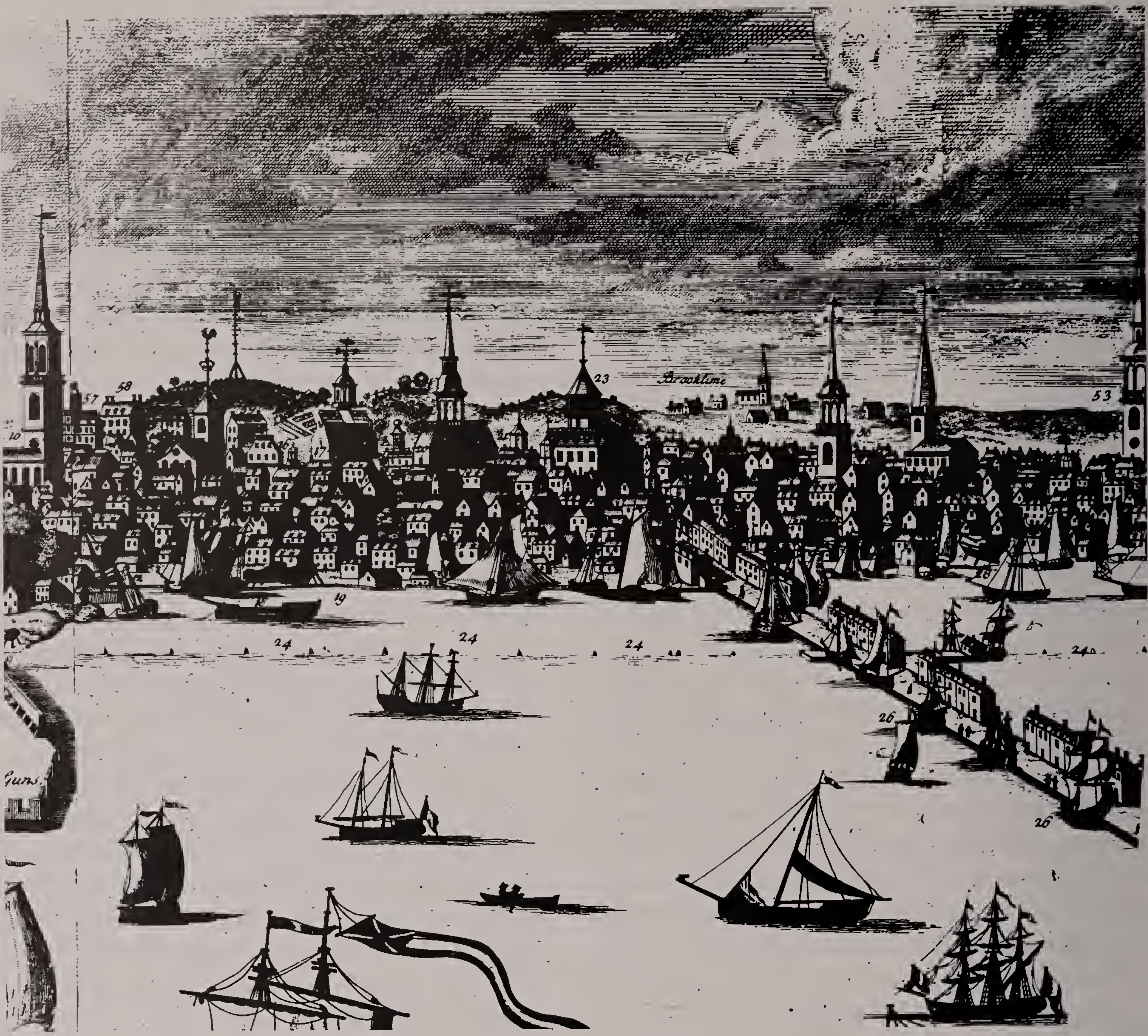
The estate remained physically undivided in 1673, when a road, ordered built through the property ten years earlier, triggered new boundary disputes, resulting in a 1674 court order to proceed with the division. However, the real trouble began in May 1679, when Ward's three Hallowell grandchildren, now of legal age, petitioned Governor Bradstreet and the General Court to reopen the family's case against

Stephen Butler. William II and Benjamin, sworn as Boston freemen in April, and Mary, represented by her husband Captain Edward Ashley, recounted their grievances. To guarantee another hearing, new evidence stated that, prior to 1648, Butler had received a house, land, and financial assistance from Benjamin Ward as wedding gifts. While Boston frowned on unscheduled lot division, the scarcity of in-town land had caused multiple building on the original grants. Although neglected by Mrs. Ward, wills often provided for the subtraction of living legacies during final estate apportionment. While the Hallowells now wanted this gift considered as part of the initial estate value, there is no evidence that they pursued Butler's house and land as part of the settlement.[19]

The Hallowells, who again criticized the Suffolk County Court for accepting Mary Ward's will, now won their verdict before this same court. The July 1679 session awarded the Hallowells the entire estate, and the distraught Butler responded with an eloquent eight-count appeal criticizing his opponents' legal tactics and the court system's fickleness regarding the case. However, the August Court of Assistants (early Superior Court) partly upheld the lower court's decision, ordering Butler to pay money to the Hallowells in order to keep his moiety. Butler won back his half of the estate on a second appeal before the October 1679 General Court (full legislature), but he and his family would not be secure for long.

In April 1680 the Hallowells secured yet another hearing in County Court, after hiring professional lawyer Anthony Checkley as their advocate. Using new depositions and an updated estate evaluation, the Hallowells declared Butler deliberately withheld their due inheritance from them to the amount of £400, likely the August 1679 court award. New testimony revealed Stephen Butler had often been in debt to Benjamin Ward, had secretly received assistance from Mrs. Ward, and "contrary to others' belief, [Butler] had been a hindrance to the business." This last remark, made by a former member of the Ward household, perhaps finally reveals the underlying source of trouble between the litigants. If Butler was a poor craftsman or businessman, this may have contributed to the proud Hallowells' belief that they should have been more favorably rewarded in the original settlement. The court now declared that all buildings and lands in Ward's estate were to be transferred directly to Hallowell ownership. That same month Stephen Butler mortgaged his own property, possibly to pay court costs, receiving only £25 in exchange. He also filed an appeal saying, with some justification, that a higher court had already decided this matter in his favor, not once, but three times, and that without new evidence (he disputed the veracity of the depositions), a lower court should not have reopened the case. Stephen Butler was doomed, however, and in September 1680, the court issued an order seizing his portion of the former Ward property which, besides part of the wharf, included a house and land occupied by Roger Browne, half the orchard, half of the smith's shop occupied by William Robbins, and the land under Thomas Smith's shop. A second order was needed in August 1681 to enforce the verdict, and Stephen Butler was committed to prison for inability to pay the remaining costs.

The final court actions were taken over a house and wharf, which should have been forfeited with the rest, but were still occupied by the Butlers. In October 1681, a court-appointed committee, composed of six former Ward employees and neighbors, reported that repairs worth £60 were needed as the buildings were barely habitable and the wharf decayed and broken down. Apparently taking Butler's impoverishment into consideration, the May 1682 court ordered the Hallowells to pay Butler £150 within one year for all lands, houses, and improvements of Ward's estate. With this payment still outstanding, Mr. Checkley filed an appeal in October 1685 against Stephen Butler's children, saying his clients did not have the money and the property was not worth £150. This provoked an angry response from Butler's wife and family, who had accepted the award as fair, but would not be put out of their right because the Hallowells had no money. To emphasize their point, they suggested the house would not have gone to ruin had the £150 been paid earlier. This time, the courts were in disagreement over allowing



Detail from the center folio of the Burgis-Price print entitled *South East View of ye Great Town of Boston in New England in America.* Long Wharf is to the right, with Hallowell's yard (#18) along the coastline to its left. Courtesy of the American Antiquarian Society.

another hearing in this bitter dispute and finally declared that they had no cause to hear them further.[20]

The Hallowells' fight to maintain possession of what they perceived to be their rightful heritage was apparently successful. According to the 1687 tax list, the combined Hallowell properties were valued at four and a half times the real estate remaining to the Butlers, whereas in 1676, their holdings had been rated equally. The Hallowell family, throughout more than a century following, continued to develop the businesses that associated their own name with the former Ward shipyard. By 1708, when the streets of Boston were first officially charted and described, the family land and shipyard were such landmarks they were used as reference points for all intersections in their neighborhood.[21]

Separating one seafaring business from another was inconceivable for families living along Boston's extensive waterfront, given their near total dependence on trading by water. Although the Massachusetts shipping records between 1687 and 1714 are not detailed enough to provide shipbuilders' names, they do show the family's involvement in the Newfoundland fishing trade. In May 1687, Mary Hallowell's husband, Captain Edward Ashley, was commander of the small brigantine *John and Mary* that sailed to Newfoundland with five men. In December 1687, he captained the twenty-five to thirty-ton brigantine *Blessing of Boston* with a five-man crew to St. Christophers, and in 1688 took the same vessel to London via Newfoundland with two hundred quintals of fish. In 1698, Ashley was sole owner and master of the twenty-ton brigantine *Endeavor.*[22] She was Boston-built and conceivably designed in the Hallowell yard, as perhaps were many vessels in these records. Although it is likely the Hallowell builders did own vessel shares from time to time, they are not named as principal vessel owners in this register.

Captain Ashley was also not the only mariner in this generation of the family. His brother-in-law, Benjamin Hallowell, well known later as a shipwright, almost perished as a mariner in the late 1680s, after being captured and enslaved by Algerian pirates. Many New Englanders fell prey to this fate while delivering fish cargoes to the Iberian peninsula and trading with the nearby wine islands. The problem became so frequent that Parliament established a £20,000 redemption fund in 1680 to help free the 1,100 English and American sailors imprisoned in Algiers and Morocco. Later that year, 390 men, including at least eleven Americans, were released on £40 ransom each, through the sponsorship of the London merchant coordinating the fund. The agony of the slavery itself is revealed in a journal kept by shipwright Joshua Gee, Benjamin's friend and contemporary. Gee, scion of another Boston shipbuilding family, was held captive from 1680 to 1687, and wrote of horrible beatings and illness while serving aboard and repairing vessels for his captors. The anxiety of people back home can be read in the papers of family friend Samuel Sewall, who negotiated Benjamin Hallowell's release. In March 1688, Sewall reported to his merchant correspondent in London that Joshua Gee was offering £30 remaining of his own ransom money to help redeem his friend. Sewall also directed borrowing an additional forty to one hundred pounds from Mr. Robertson, who controlled the redemption fund, promising he would cover the debt himself as the "estate of the Hallowells is but little, and that much exhausted by lawsuits." Prisoners were sent to London following their release, and in early 1689, Samuel Sewall personally sailed to England to retrieve Hallowell. Although Sewall despaired over Hallowell's chances of surviving the long voyage home, he recorded his joy in early 1693 when he witnessed Benjamin being baptized with his infant daughter.[23]

These events may suggest the shipyard was run in the late 1680s by his father and brother William, but it is equally possible Benjamin was sailing the maiden voyage of one of the shipyard's vessels to study her working capabilities. Many respected shipwrights were qualified mariners whose experience handling vessels under sail served to refine the elements of their own designs. Benjamin's rescue from this often-deadly fate enabled the shipyard to evolve under the direction of the descendant Benjamin Ward had perhaps recognized as the future shipbuilding talent of the family.

Although few clues remain to show what type or number of vessels the family built toward the end of the seventeenth century, the Hallowell shipyard had a growing reputation in Boston Harbor. Heavy shipping traffic demanded access to reliable shipwrights, not only for building new vessels, but for repairing those constantly passing through New England's ports. "By the third quarter of the seventeenth century, colonial shipbuilding was sufficiently established to play a significant role in the development of the British merchant marine." William Hallowell was probably in the forefront of Boston's shipbuilders, judging from the placement of his name on certain documents. He was called upon by local authorities, in conjunction with other experts, to pass judgment on questionable vessels. In 1671/2, Governor Bellingham appointed three mariners and six shipwrights to examine the ketch *Hope of Meuis,* recently repaired in Boston, but forced to return due to severe leaking. Captain Thomas Olfield and William Hallowell signed off for the committee, which condemned the vessel. The other shipwrights consulted were John Anderson, Nathaniel Greenwood, Edward Grant, John Ransford, and Hallowell's neighbor Jonathan Balstone. In 1674, William and Benjamin were paid for graving the bark *Thomas and Mary.* In 1675, William Hallowell was paid for graving an unspecified ship. In 1678, the family shipwrights appeared as part of a complex estate settlement, having sheathed or repaired the ship *Expectation* for owners Torrey and Gretian. In 1679, William Hallowell sued Thomas Saxton Jr., master of the ship *Elizabeth,* to recover the cost of materials and repairs. In 1698, William Hallowell sold the ship *Jane*'s hull, fully masted, to John Dauvergne for £190, although it is not clear if Hallowell also built the vessel. One of the family shipwrights appeared on the account for the 1690 sloop *Speedwell,* an armed vessel apparently built or outfitted for the province, possibly the seventy-three-ton vessel of that name still in use in 1711. In 1705, Benjamin was listed on the bill of disbursement for the *New Province* galley built by his friend the shipwright Joshua Gee. It would seem from these documents that the family shipyard could accommodate the larger vessels in use and that competing shipwrights sometimes cooperated on large contracts.[24] The Hallowells' shipyard business was probably aided by the various town responsibilities the family readily accepted and the actions they apparrently supported in Boston's burgeoning maritime community.

Citizens of the Harbor

Freemen of Boston had the right to participate in town affairs, and the obligation if asked, to serve in some annually appointed duty. As full citizens, the Hallowells made themselves known on both fronts during their long tenure in Boston, sometimes disputing with town authorities if actions had an impact on their shipyard. William Hallowell I, a member of Captain Hudson's Militia Company, was chosen tithingman for his precinct in 1680 by the selectmen and magistrates, suggesting he was a responsible and God-fearing man. Probably not a demanding job, the same position was later held by his sons: William II in 1698 and Benjamin from 1699 to 1700. The senior William's other community appointment as one of two water bailiffs, was probably a nuisance, so it is to his credit he agreed to hold the post as long as he did. Appointed in 1678 and 1679, and then consistently from 1684 to 1692, Hallowell served with a number of partners over the years, usually with someone who lived at the other end of the cove, near Scarlet's Wharf. The family shipyard location was ideal for spotting trouble in the southern end of the great cove and the channel approaching the town dock. The water bailiff's duties included keeping shore roads and harbor flats free of stray anchors, shipbuilding timber, and logs. If spotted in the shipping channel, this debris had to be marked with a beacon, although no fires could be kindled within three rods of any warehouse, wharf, or woodpile. Casting of dirt and dung into the water was subject to fines, with the penalty for throwing ballast overboard being especially steep. Building debris was always an issue with the town authorities due to the large number of permanent and occasional shipyards along Boston's waterfront. Hallowell certainly had the authority and the personality to expect results from his orders, and if needed, the necessary tackling equipment to remove heavy materials from the water or shoreline. That William held this position is amusing in light of the number of times their own shipyard would be cited for blocking waterfront streets in later years.[25]

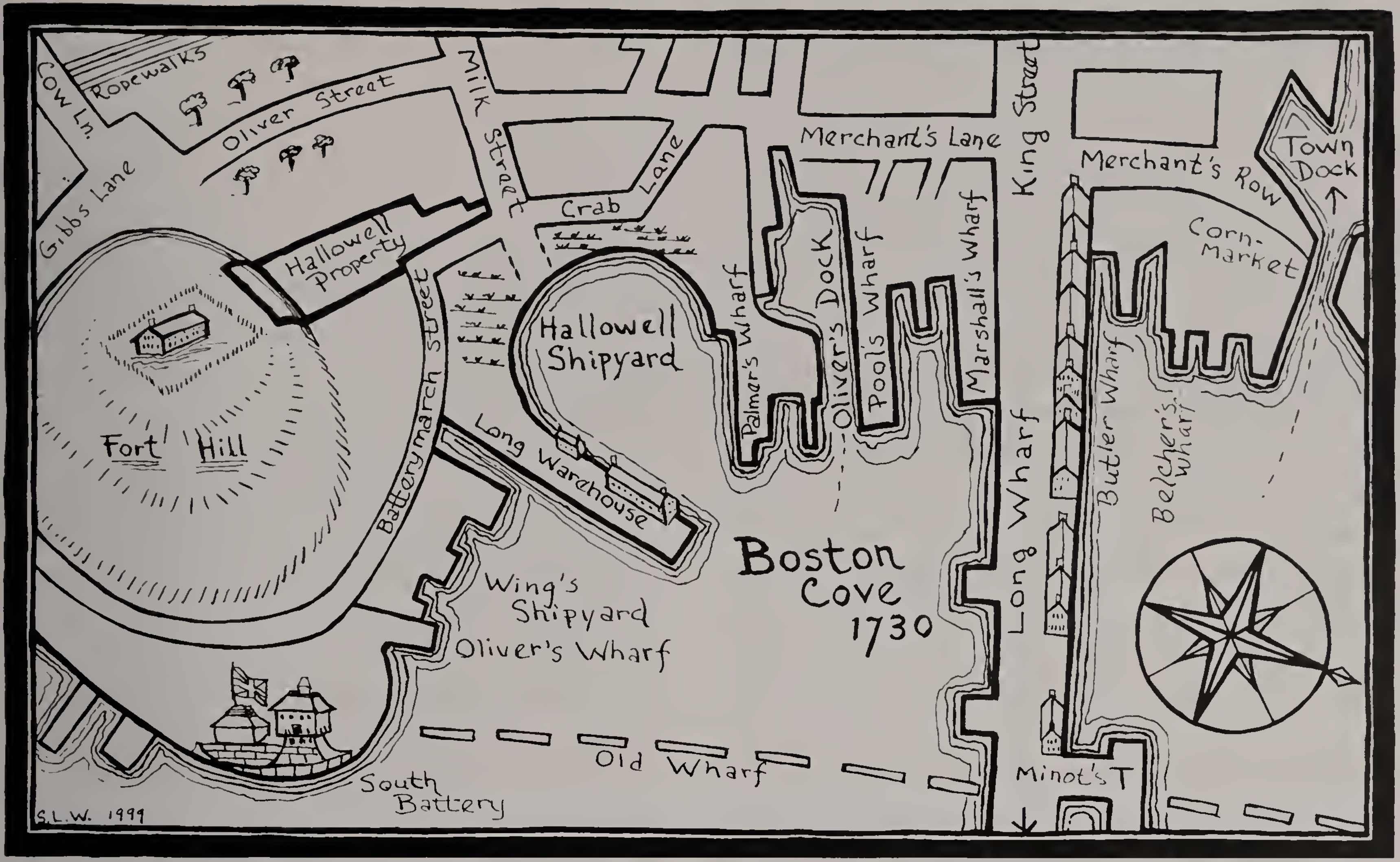
House and shipbuilding practices were closely aligned in colonial life, which occasionally found shipwrights acting as housewrights. With such plentiful forests, the convenience and low cost of building with wood, when compared with brick or stone, made wood-frame structures the most common in Boston. In 1697, all three Hallowell men, apparently feeling the pinch of the rising cost of living in Boston, subscribed to a large petition to repeal a law requiring that buildings be made of brick saying "it was prejudicial to inhabitants and [that] children of the first planters (including themselves one supposes) might have to leave [Boston because of it]." The petition failed and, despite numerous and sometimes devastating fires, Boston continued to use wood for exterior work. It would be the middle of the next century before the population was willing to submit to stringent building codes for its own protection. In an action closer to their business interests, seven shipwrights petitioned Governor Bellamont and the General Court in the late 1690s to complain about fraud in the measure and quality of delivered ship timber and plank. Headed by William Hallowell, the petitioners included Josiah Gill, Alexander Sears, Samuel Greenwood, Joseph Grant, John Greenough, and Joshua Gee. They were concerned that timber arriving from all parts of the province was one-eighth to one-sixth short of the stated quantity, which not only created problems within the colony, but was a scandal in their dealings with the West Indies and other places of trade. Boston was the collection center for the exportation of New England's vast lumber products, so it only made sense to appoint a group of men annually to serve in a quality-control capacity. Indeed, the last real town job held by a Hallowell was in 1724, when Benjamin Hallowell's son, Benjamin II, was appointed one of eight "viewers of boards, timber and shingles." Twelve such "viewers" were needed by the 1760s when increasing quantities of lumber passed through the harbor. By the mid-eighteenth century, the Hallowells themselves had become exporters of a full range of lumber products, such as staves, shingles, and hoops that they sent primarily to the West Indies. Much of their lumber may have been harvested from their own extensive lands along the Kennebec River in Maine. The family also operated a water-powered sawmill on the Cathance River in Bowdoinham beginning in 1765.[26]

Family participation in regular town duties dwindled during the 1720s. Benjamin Hallowell I paid a fee in 1727 rather than serve as a town constable, one assumes because of time constraints or age. Both Benjamins, father and son, had also reached a high enough merchant standing that they could afford to disengage themselves from these lower-level community tasks. However, the family presence was still felt in town affairs near the waterfront. The Hallowells were repeatedly in violation of the selectmen's orders to keep the coastal roadways clear of shipbuilding materials and, although this was a common problem among Boston shipyards, the Hallowells' historical view of their property rights sometimes led them into contentious boundary disputes with the town. At times, the family had to rely on ancient deeds to remind the town of earlier agreements or take depositions from their tenants in order to defend their land rights based on long-term usage. Sometimes they just ignored the town's authority, as in January 1719, when Benjamin I was ordered to remove a building obstructing Crab Lane that ran alongside the shipyard. A year and a half later, with the building still sitting on the road, the town commenced a court action against Hallowell, adding that he was also obstructing the water course at the end of Milk Street. Finally the selectmen went on the spot to execute their order in 1724, following a town vote and the launching of a ship, illegally built on the location by Mr. Hood. Workmen removed Hallowell's plank and timber, set up posts marking the town's ancient easement to the low water mark and dug a trench to allow water run-off from the street. Despite these local disputes, the family shipwrights were still among those consulted by the province when a vessel's condition was in question. In 1738, Governor Belcher requested shipwrights Stephen Greenleaf, Benjamin Hallowell (II), Alexander Hunt, Isaac White, and Richard Hood to inspect a chartered vessel after complaints from the hirer. Needless to say, she needed considerable repairs and was deemed unseaworthy by the committee. In 1740, Benjamin Hallowell was asked to join a committee to appraise and measure the tonnage of five merchant vessels taken into military service to transport Massachusetts troops to the West Indies, for what would turn out to be a disastrous British campaign. The five-man team, who charged £30 for their report, included the well-known shipwright Henry Berry and the sailmaker William Palfrey.[27]

The colony, and later the province of Massachusetts Bay, was militarily aggressive in defense of its rights, sometimes planning offensive as well as defensive preparations ahead of Great Britain. With frequent wars interrupting the primary livelihoods of fishing and trading, Bostonians took a number of measures for their own protection, including arming and training themselves, securing armed vessels for coast guard service, and building fortifications around the harbor. New England's hardy and capable mariners and fishermen often became naval seamen during wartime, signing on with colonial coast guard vessels, merchant privateers, and even the Royal Navy. Shipbuilders were usually exempt from military training, but their financial support, supplies, and skills were often needed, and materials and labor were acceptable donations to the government's military efforts. Shipwright warehouses may have been repositories of government and merchant-owned ordnance between wars. It was probably in this capacity that Hallowell was listed as having three guns in the 1673 inventory of wharves and guns. By early 1674, two armed vessels were equipped by the Massachusetts Bay government to attack the Dutch off Long Island. During the same period, fear of a Dutch invasion precipitated the harbor's first engineering feat, the building of the Barricado, a sea wall or the "Old Wharf" as it was later called. As one of forty-one subscribers, William Hallowell paid for thirty-four feet of the structure, thereby gaining use of the wharf for twenty years in exchange for maintaining his section. This wall, which stretched across the mouth of the cove between Fort Hill and North Boston's coast, allowed docking of up to 300-ton vessels, and also protected the waterfront against storm surges. The position of this sea wall was used to swing an imaginary arc, called "the circular line," toward the waterfront, which marked the outer perimeter of cove residents' wharfing rights in the marsh. After 1700, the term "circular line" on deeds defined the extent of actual property ownership between the coastline and the sea. As the "Old Wharf" fell into disuse and slowly subsided beneath the water, the term circular line also became obsolete. In 1686, William Hallowell contributed a financial sum toward the structures of Castle William, the fortified island guarding the entrance to Boston Harbor. In his last public deed, he contributed lumber in 1702 and 1703 for the buildings of the castle and oakum for the purpose of caulking the roof over the island's armory and its cistern.[28]

Approaching the Zenith

When Boston entered what several authors have described as the "Golden Age of Shipbuilding" (1700–50), the Hallowells, having already established a local reputation, were perfectly poised to make important contributions to the industry. With the life span of many Hallowell men averaging close to eighty years, there was perhaps greater than usual continuity as the shipyard business moved between generations. Following the death of William Hallowell in August 1702, control of the yard passed smoothly to his sons Benjamin I and William II, who had probably been running the yard for some time. William bequeathed the property in equal shares to his three children, based on a 1687 division, written when they all occupied dwellings on the estate. While William had retained the use of the wharves and flats for himself during his lifetime, this tripartite devise prevented disputes like the one following Benjamin Ward's death and guaranteed the family held onto their hard-won legacy. Between 1703 and 1719 the three Hallowell descendants amicably partitioned the property using reciprocal deeds and releases, leaving Mary Ashley Webb and William II as owners of the duplex Ward-Hallowell mansion, and Benjamin probably occupying his father's old house on the waterfront. All three received portions of the flats, wharves, tenements, and upland orchard, but in 1713, Benjamin bought his sister's share of the shipyard, as her family was not involved with shipbuilding. William II (1654–1736) reportedly spent his later years in Newbury, probably after his 1708 marriage to his third wife, Sarah Endicot. These circumstances may



Boston Cove between Fort Hill and the town dock around 1730. This was drawn by Sandra Webber and based on the maps from the 1720s by John Bonner and William Burgis and family deeds. Courtesy of Sandra Webber.

explain his gradual disappearance from the Boston court records.

Many of the third generation Hallowell men and family in-laws pursued maritime occupations. One of Ashley's three sons-in-law, Joseph Prince, was a Boston mariner. Among William II's seven surviving children were two shipwright sons, William of Boston and Ward of Scituate, and two shipwright sons-in-law, Joseph Stevens of Newbury and Robert Dyre of Boston. Among Benjamin I's six surviving children, sons Benjamin II and Samuel and son-in-law Jonathan Salter became shipwrights, and son William became a blacksmith. By 1725, Benjamin II (1699–1773) was handling all the accounts and legal business for his father, Benjamin I (1656–1737), and was likely the shipyard's new principal builder. Fame as a shipwright was possible through good design, great skill, and hard work, but wealth was achievable only by becoming a successful merchant. The Hallowells, who had shown an interest in merchant shipping as well as shipbuilding since their first appearance in Boston, were to emerge as merchants of some standing during the next few decades. The next generation of the family acquired fame through shipbuilding and fortune by exporting colonial commodities and importing and distributing European goods. Some of their contacts in London, Bristol, and the West Indies brought shipbuilding contracts into the bargain, which, in turn, helped promote the business of the shipyard.[29]

The second Benjamin Hallowell (1699–1773) can perhaps be considered the most ambitious and enterprising member of this well-established and strong-minded clan. He brought his family to a new level of wealth and prominence in the more lucrative merchant-shipping world, while retaining a strong reputation in the profession of shipbuilding. By mid-century, he surpassed his father's fame, becoming the most acclaimed of the family builders, a leading business representative of the town, and the new patriarch of the Hallowell family. Addressed as both merchant and shipwright, he was the first Hallowell to assume the title of esquire, conferred in New England on the basis of community standing rather than honorary or legal affiliation. During the 1730s, Benjamin II became an early participant in Boston's first Masonic Lodge and a member of the Ancient and Honorable Artillery Company.[30]

Before his father's death in 1737, Benjamin began buying back the extended family's shares of the Ward estate, which had descended to relatives of his own generation. In 1733, Benjamin bought the lands remaining in his aunt Ashley's allotment for £390, and following his uncle's death in 1735, he bought William II's entire one-third portion. Included were William's part of the shipyard for £600, his lands and tenements for £1,050, and half of the mansion house for £550. The fact that Benjamin was able to pay nearly £2,600 to buy out his first cousins suggests he was operating one or more thriving businesses. These transactions gave him control of over two-thirds of the original Ward holdings, and while later deeds show he used these parcels for collateral from time to time, Benjamin not only held onto what he acquired, but continued to reconsolidate the original compound from his own siblings and the Butlers over the next thirty years. He also bought land adjoining his shipyard on the other side of Milk Street in 1733, two-thirds of his neighbor Gillam's shipyard in 1749, and a ropewalk and land in West Boston in 1752. The first ropewalk in Boston was opened by John Harrison of Salisbury, England, in 1641. By the 1740s, fourteen ropewalks were providing cordage to Massachusetts yards. The ropewalk acquisition was an understandably good investment in terms of shipbuilding and maintenance costs. Although the largest proportion of a ship's cost was the forty-five percent that was the shipwright's work, cordage ran about twenty-one percent, and iron represented another sixteen percent. To be able to produce rope and cable in a shipbuilding town had clear advantages and was likely profitable.[31]

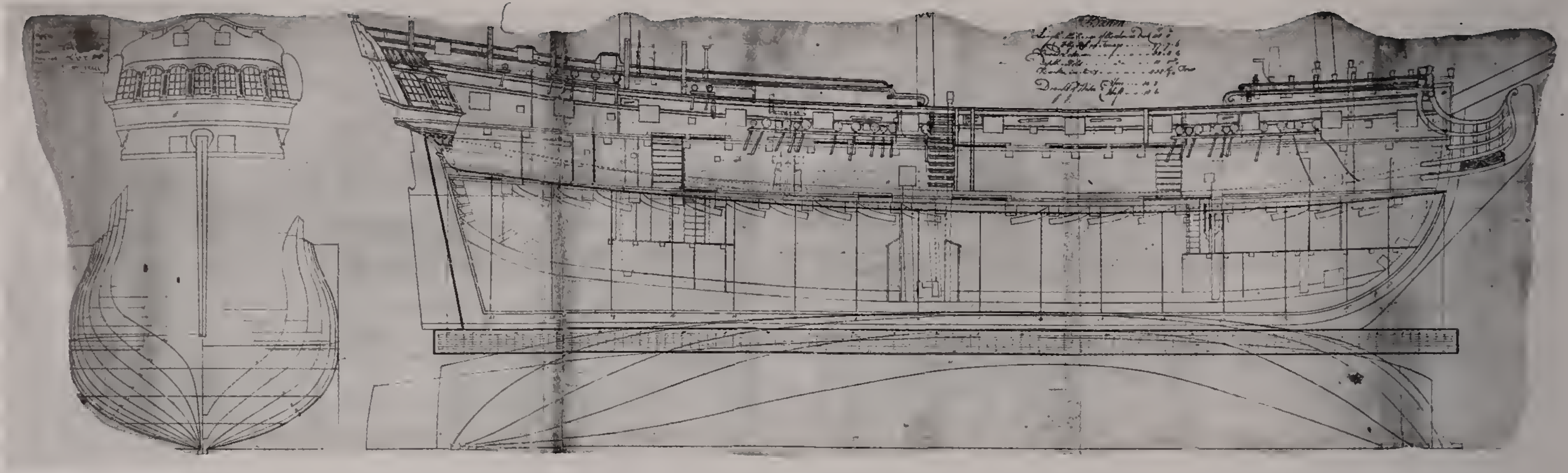
By the 1720s, during a longer-than-usual break from war, New England's maritime industries began to boom. If the 1724 London shipwrights' petition outlining New England's shipbuilding was accurate, it reflected a doubling of shipping launched in New England from roughly eighty-five vessels per year between 1713 and 1720 to 175 vessels per year during each of the following four years. Perhaps in recognition of Boston's growing economic level, two separate maps were engraved of Boston in the 1720s, one by John Bonner and another by William Burgis. The latter, in conjunction with William Price, also offered an accurate view of Boston from the harbor side, which recorded known buildings, wharves, defensive batteries, and about fifteen shipyards permanent enough to be included. A count of the number of large and small vessels under construction in this print reveals that three yards appear to have two vessels underway, while at least eight sites have one hull on the stocks. "Halloways yard," appearing as #18 on the Burgis-Price key of landmarks, is located in the same cove as the yard of Stephen Greenleaf, a relative of the Butlers by marriage, who may have leased his frontage from the Hallowells or the Gillam descendants. The numeral placement suggests there were two large hulls under construction in Hallowell's yard and a third anchored just outside the cove, although separating the adjoining Greenleaf and Hallowell yards is difficult.[32]

The eighteenth-century Hallowell shipyard operation can be examined in more depth than in previous generations through court documents, family papers, and Boston newspapers, which began publishing in 1704. The sheer number of civil cases under Benjamin Hallowell II's name suggests either Boston had grown more litigious with the town's population and economic growth, or Benjamin, who had inherited the strong will of his grandfather William Hallowell, used his tenacity to advantage. Most cases arose over account disputes and were settled by three referees, on agreement of both parties, or went to trial by jury. The appeal options appeared to be endless, as in the previous century, with the loser posting bond for a new hearing. The most useful items in studying the shipyard are the case support documents, such as accounts between merchants, personal indentures, warrants, and reviews for appeal. Many account differences were not satisfactorily settled due to the tedious effort of calculating numerous and fluctuating colonial and foreign exchange rates, and appraising merchantable goods of varying quality. Merchant books recorded complex cross-credit balances involving innumerable third-party transactions that gave rise to further difficulties. Shipyard information can be gleaned from the Hallowell court papers even though their shipbuilding accounts are usually intertwined with their activities as shippers and brokers.

No single document survives that would give any real sense of the number of persons the Hallowell shipyard employed during its heyday. There were communities of maritime craftsmen in both the North and South Ends of Boston, clustered around the town's building sites. Carpenters, joiners, caulkers, mastmakers, sawyers, carvers, blacksmiths, riggers, and sailmakers would have been contracted for their services, some on a more or less regular basis. For example, during the late 1740s and early 1750s, ship joiners Samuel Holland and Joseph Ballard were routinely contracted by the shipyard for the finer, on-board woodworking. The Holland family joiners, who lived near the Hallowells, continued to work with the yard for decades and were still active in Boston after the Revolution. The yard undoubtedly employed many ship carpenters in the course of its long history, but unfortunately only a few names have survived. Hulls were usually constructed under the direction of a master builder with the assistance of from one to six additional shipwrights. The Hallowells apparently served as their own designers and master builders, and it is possible some of the many family shipwrights assisted during the yard's busiest decades. Samuel, Benjamin II's shipwright brother, owned a portion of the shipyard, while their brother William, the blacksmith, fabricated such items as bolts and hatch rings for the yard. Benjamin Hallowell II never trained any of his sons in the shipyard, a decision his London son-in-law, Samuel Vaughan, found lacking in foresight, having warned that the business would as a consequence either leave the family or that it would come to an abrupt end when Benjamin died.[33]

The Hallowells needed to hire experienced shipwrights as well as apprentices in order to maintain their busy shipbuilding schedule. Scattered advertisements, court papers, and account entries provide the names, occupations, and wages of individuals employed during certain projects or years. In February 1739, William Miller, a teenage servant of shipwright Samuel Hallowell, ran away and was being sought through the weekly newspaper. Readers were directed to the shipyard to retrieve the fifty-shilling reward for returning young Miller, who may have been indentured to Samuel for on-the-job training. On 13 October 1731, Benjamin Hallowell recruited two Braintree shipwrights, Robert Scrivener and Samuel Norton, for one year's labor at an agreed wage of £7 each per month. This suggests the yard was operational even during the winter months and that master builders needed such contracts to secure long-term commitments from their workers, possibly due to a glut of opportunities at that time. Hallowell recovered £50 in court, using this two-way indenture, when Scrivener defaulted, leaving the yard's employ ahead of the agreed-upon date. The two Boston witnesses to this agreement were neighborhood shipbuilder Benjamin Greenleaf and Petre Gaborit, who may also have been a shipwright.

Accounts attached to a yearlong court case in 1745 and 1746 reveal the interwoven nature of the Hallowells' enterprises and list the names of vessels and persons associated with the shipyard that year. Men who provided "Sundry carpentry work" on the ship *Prince of Wales* were Abraham Holland, William Townsend, Thomas Kox, Moses Lewis, Benjamin Bathelet, Thomas Oliver, Amos Howard, James Howard, John Truman, John Freeman, and Phillips Howell. With the exception of Holland's sixteen and Lewis's twenty-two days, most of the men provided two to four days' labor, and several probably worked on the sloop *Yarmouth,* which was in the yard at the same time. Nearly thirty years later, some of these same names would appear on Hallowell shipbuilding accounts. Two other vessels involved in this legal case



Lines profile of HMS *Boston,* a vessel built by Benjamin Hallowell around 1746. Courtesy of the National Maritime Museum, London.

reveal the complexities sometimes arising over account payments. Hallowell, who became half owner of the ship *Vernon* in lieu of debts owed him by two merchants, also became responsible for half of the £8,955.20 laid out for arming, provisioning, and freighting her with lumber products. The refitting of cargo vessels was a regular concern of Boston merchants during the frequent colonial wars, and the *Vernon,* already in military service in the early 1740s, was possibly being readied as a letter-of-marque. The ship's refit account includes not only armament and provision merchants, but many of Boston's specialized maritime artisans and suppliers including sailmaker Newman Greenough, mastmakers Greenwood and Snelling, rigger Edward Dumaresq, boatbuilder Joseph Grant, oarmaker John Hooton, carpenter Mr. Maxon, and carver Mr. Robinson. William Clough provided the anchors, and a new compass was supplied by James Kelsey. The second ship, the *Charming Polly,* repaired by Hallowell following storm damage on her passage from Jamaica to London, was hypothecated over to him when the owner refused to honor the original billing agreement. After a year of heated court appeals, accusations, and unpaid executions, Benjamin Hallowell, after dispensing his opinion with the usual family feistiness, was prosecuted for publicly haranguing and assaulting his opponent on Boston's busiest street.[34]

Slave laborers were a common sight in Boston's larger shipyards, where builders usually charged the same daily rate for all shipwright laborers, including their slaves. Blacks, and possibly Native Americans, were certainly employed by the Hallowell yard, and although there were a number of free blacks engaged in such maritime trades as caulking and rigging, details suggest that the Hallowell workers were, in fact, slaves. In the 1740s, twenty percent of all male slaves in Suffolk County, Massachusetts, belonged to mariners, shipwrights, and fishermen. Slaves even completed shipbuilding apprenticeships, especially if they were born into the household or purchased by the shipwright, and slaves so trained were more highly valued than farm laborers. For example, in February 1754, a young black man was advertised in a Boston newspaper as "strong, about 27, can do any work indoors or out, can work at the ship-carpenter's trade, has had small pox" (another widely understood bonus). The estates of Benjamin II and his brother Samuel each listed only one elderly slave, possibly indoor or household servants. This does not exclude the possibility that some of their outdoor laborers, including ship carpenters, had been family-owned slaves. In 1750, Benjamin Hallowell II repeatedly lost a court battle with shoemaker Bennet Balemn, whom Hallowell claimed as his slave. Although the Boston community tolerated a certain amount of slave-holding, juries usually refused to acknowledge such ownership in their decisions. Balemn won the case after several appeals, and Hallowell was charged and fined for restraining the shoemaker's freedom. Evidence supporting the use of black shipyard labor under the tenure of both Benjamin Hallowells appears in occasional account entries, newspaper advertisements seeking runaway servants (a term used interchangeably with slave), and most tragically, in notices describing shipyard accidents and deaths. In 1725, Benjamin I lost a dispute to Thomas Smith over £4.12.9 wages due to Hallowell's "man George" for twenty-six days labor. In 1740, the *Boston Newsletter* carried a full head-to-toe description of a "Spanish Negro Man Servant named Jack" who had run away from his master, Boston shipwright Benjamin Hallowell (II), who offered forty shillings and all charges for his safe return. In 1748, at the end of a busy season, Hallowell's yard suffered a not uncommon accident, when a Negro man fell from the stern staging of a new ship onto the timbers below, dying within minutes. In early November 1758, a Negro man belonging to Benjamin Hallowell was found hanged in a barn after being missed for several days. No name or trade was given for this man, and no further information explained whether his terrible death was a murder or a suicide. Perhaps there was no need to publish facts already known or assumed by the local maritime community. Benjamin Hallowell was then embroiled in a nasty accounts dispute with a Portsmouth merchant, which in early November erupted into an acrimonious letter exchange publicly inserted in the front pages of the Boston press. The slave's death may not have been connected to these incidents, but it likely went unpunished, perhaps viewed by some as a mere loss of an investment.[35]

Timber was the most expensive material purchased by shipwrights, with large quantities needed on a reliable delivery schedule for work to progress in a timely fashion. Hallowell shipyard receipts from the late 1730s through the 1740s, marking delivery of keels, futtocks, knees, and timber by the ton, show the yard purchased white oak from many Massachusetts towns south of Boston. Cartloads of timber, probably water-ferried to Hallowell's wharf, came from such locations as Braintree, Dedham, Stoughton, and Weston, towns that had been supplying the shipbuilding industry since the seventeenth century. American white oaks grew in stands sixty to eighty feet tall and up to four feet in diameter, and Massachusetts white oaks, especially the defect-free swamp and coastal specimens, were of excellent quality. Plank or planking timbers were often delivered by the same men who harvested frame timbers, making white oak an important commodity for the communities surrounding Boston. During the currency depreciation of 1747, the timber suppliers of southeastern Massachusetts met in Bridgewater to set prices on merchantable white oak timber, "it being a principal part of our publick medium." Their prices for thicknesses per one thousand feet of plank were: £17.10 for three inch, £13.15 for 2½ inch, and £10.10 for two inch. Even considering the few surviving documents, it is clear that the Hallowell shipyard purchased timber and plank from numerous suppliers. For example, in May of 1735, they received deliveries from at least twelve different men, totaling over twenty-two loads of oak of assorted shaped timbers and planking. This amount would accommodate only a small vessel's framing, based on the proportion of one wagon load equaling fifty cubic feet or roughly a one-ton log. Merchant ships required roughly one load per ton and warships one and one-half to two loads per ton, with the price per load dependent on the size and quality of the logs.[36] In the yard's later years, Benjamin Hallowell leased or operated a mastyard adjoining his shipyard, possibly on the acquired Gillam shipyard property, allowing him to provide a convenient service not available from every Boston shipwright. The Hallowells may well have harvested pine masts and spars from their own landholdings along the Kennebec River of Maine. Benjamin Hallowell II was a prominent proprietor in the Plymouth Patent of the Kennebec Purchase, a vast land grant reactivated by Boston entrepreneurs in the early 1750s. In 1771, he and other members of the proprietorship challenged the king's right to mark and confiscate mast trees from their lands without paying due compensation, suggesting they wanted the trees for their own profit or use. The family's connection to the Royal Navy aside, the Hallowells were probably not involved with the Portsmouth or Falmouth mast trade, which had its own set of colonial agents and shippers. However, they certainly supplied a variety of naval stores, such as tar, pitch, and turpentine, to England and possibly to North American-based Royal Navy shipyards as well.[37]

Experienced shipwrights could and did build small vessels by eye, something on the order of a twenty-ton sloop or schooner. Half-models and drawings were employed by colonial shipwrights to design larger vessels, although no original ship plans remain from any colonial yard.[38] A Hallowell account entry from April 1735 notes that timbers were selected "out by one Holburts moulds and directions," suggesting the yard employed someone to choose the desired curved timbers using predesigned hull profiles. This may imply the Hallowells had sufficient space for a mold loft in their shipyard workhouse, and as master builders they provided some sort of model or drawing from which to work. Admiralty drafts of Benjamin Hallowell's HMS *Boston* and his later schooner *Sultana,* executed after the vessels arrived in London waters, are among the few surviving period drawings of colonial American vessels. Eighteenth-century British Admiralty drawings are considered among the most finely executed and elegant ship plans ever produced. While bearing little resemblance to a shipwright's rough working plans, the mere existence of these drawings suggests a respect for Hallowell's designs during his own lifetime, and their survival has provided maritime historians with firsthand illustrations of what Boston builders were capable of designing. For generations, American shipwrights were trained using designs based primarily on contemporary British models, combined with local masterbuilders' concepts. Among the books in the Hallowell library, confiscated and sold by the state during the Revolution, were at least two British texts on shipbuilding: *The Shipbuilder's Assistant* (London: William Sutherland, Mount and Page, 1726) and *Murray on Ship-Building,* probably the book by Mungo Murray entitled *A Treatise on Shipbuilding and Navigation* (London: A. Millar, 1765). Sutherland covered all phases of the mathematical education relevant to and demanded by shipbuilding, with diagrams describing naval architecture. Murray's volume discussed ships of war, with an added emphasis on a mariner's training, suggesting the link between navigational skill and shipbuilding.[39] For generations, Boston shipwrights also had access to Europe's best merchant vessels right in their own harbor. While the influence of British and European designs on American builders is undeniable, there were also instances of American innovations affecting vessel design abroad. Although most colonial American merchant vessels were built for secure and efficient cargo carriage and not particularly for speed, the Hallowells sometimes incorporated specific designs that allowed their ships to provide both sure and swift sailing. American mariners and builders stood in high repute, and thus successfully managed to rebuild their dismantled maritime economy after the Revolution.

"For Building Famed"

Between 1730 and 1750, Boston reached its pinnacle as the shipbuilding capital of North America. One observer stated in 1738 that forty-one topsail vessels equaling 6,324 tons were built in Boston. Ten years later, shipping totaling just over ten thousand tons burden was launched by Boston shipyards during a twelve-month period ending in 1748. Besides Hallowell's yard, those of the Greenough, Lee, and Clark families had been in business since at least 1722, and several shipyards active in the 1740s remained in business another twenty years or more. During the height of Boston's building, the Hallowell yard was among the largest producers, although they were certainly not without competition. In 1748, Richard Hood's yard built nearly as much tonnage as Hallowell's, and in 1756, Greenough's yard approached Hallowell's in total output.[40]

The town of Boston was rightfully proud of its local shipbuilders. Benjamin Hallowell was hailed in the press for the quality of his designs, the size and force of some of his constructions, and the speed of his delivery. The scope of the Hallowells' clientele is revealed in a number of surviving records and contracts, some quite famous in the history of Massachusetts Bay. While providing insight into the type of sailing vessels Benjamin Hallowell was capable of building, they are also a testament to his well-deserved reputation.

In 1739, the ship *Hallowell* was completed, loaded, and prepared to sail for John and Joseph Gerrish, representing the Gerrish and Barrell Company, at a cost of "upwards of £2500." The launching party, traditionally paid for by the owners, ran to an additional £20.8. Although the Gerrishes appear to have been the principal owners, the ship's first master, Alexander French, had a one-quarter interest until a widely published accounting dispute with Gerrish deprived him of this trust. The name of the vessel may merely be a tribute to the builder, or perhaps the Hallowells owned shares in her or had business ties with the Gerrish family. The *Hallowell,* armed because Britain was at war with Spain, was likely destined for Tenerife to traffic in wine, the same route taken by other Gerrish vessels. The *Hallowell* was immortalized in a poem composed by local wit Joseph Green that appeared in the 26 June 1739 *Boston Gazette* and detailed the first public procession of the Masonic feast of St. John the Baptist in America. As outgoing master of St. John's Lodge, Benjamin Hallowell may have been hosting the event on board his namesake vessel to honor incoming master John Thomlinson who happened to be one of Hallowell's merchant partners. Captain Alexander French was also a Masonic brother in the same lodge. These stanzas followed the ones describing the procession and the special celebratory feast:

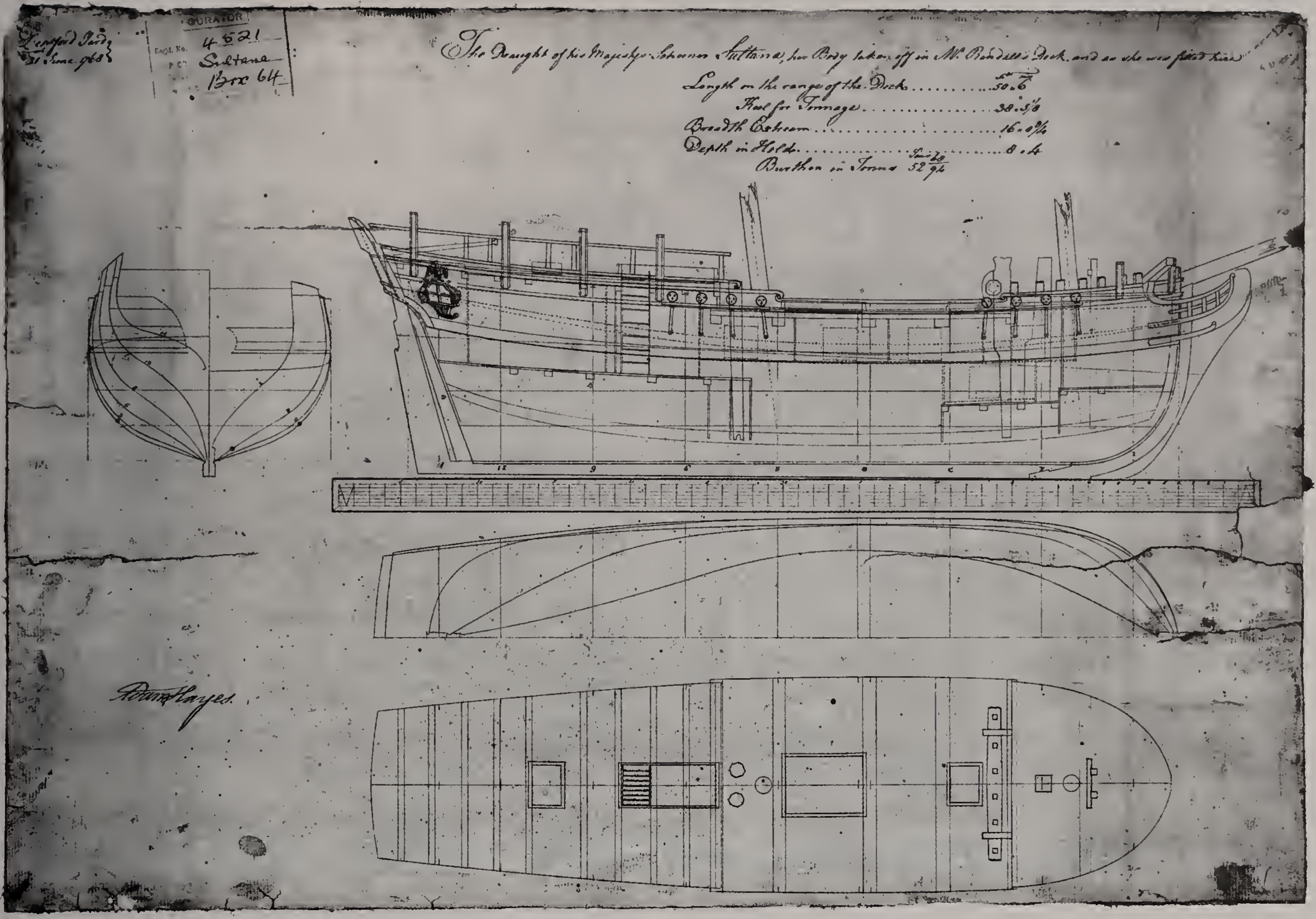
> Girls left their needle, Boys their Book,
> and crowded in the Street to Look;
> And if from *Laughing* we guess right,
> They were much pleased with the sight.
> All this by land—now follows after
> The gallant show upon the water.
> The Ship, that HOLLOWELL is named,
> from HOLLOWELL, for building famed;
> of which their Brother Alexander
> French was part owner and Commander;
> Soon as appeared the Eastern beam
> this ship, haul'd off into the stream,
> Red baize was tacked on the top,
> And all her colours hoisted up
> And on the mizzen peak was spread
> A leather *apron,* lin'd with red.
> The men on board all day were glad,
> And drank and smoked like any mad.
> And from her sides three times did ring,
> Great guns as loud as *any thing,*
> But at the setting of the sun
> Precisely, ceas'd the noise of gun,
> All ornaments were taken down,
> Jack, ensign, pendant and APRON.[41]

Maritime historian John Millar has suggested that Benjamin Hallowell built the famous Massachusetts letter-of-marque ship *Bethel,* which is possible considering the family's business ties with owner Edmund Quincy. Built around 1746, the *Bethel* was an example of the better-built ships of her day, the double-decked stern gallery, an unusual feature of a ship of her size, being more typical of an East Indiaman. Millar constructed a draft based on the ship's portrait and estimated her size to be 240 tons, with a length of 100′9″, a keel of 68′3″, and a breadth of 26′. Although sixteen guns would have been typical, and Millar calculated she could have carried over twenty, she actually carried fourteen real guns and six wooden dummies. While most colonial merchantmen were sufficiently armed during wartime to respond defensively, the *Bethel,* with a crew of only thirty-eight men, acted the true privateer during a bold action against an enemy vessel off the Azores in 1748. Masquerading as a French vessel, she outwitted and captured a three- to four hundred-ton Spanish ship armed with twenty-four to twenty-six guns and over one hundred men. The prize ship *Jesus, Maria and Joseph,* carrying gold, silver, and valuable commodities, worth an estimated £48,700 sterling, was condemned by the Admiralty at St. John's and sold at Boston's Royal Exchange Tavern in November 1748. The *Bethel* became the first identifiable American ship to have her portrait painted, perhaps in commemoration of her immensely successful privateering venture.[42]

Benjamin Hallowell certainly built and repaired vessels for his own family and many prominent Boston merchants, but the survival of his name as a shipwright and his enduring fame depends largely on contracts he won from the provincial government and the Royal Navy. On 9 July 1740, in response to the war with Spain, Governor Belcher proposed a vessel of force be built to protect the Massachusetts Bay coasts and her fishery. The same day, the House of Representatives voted to appropriate £6,500, and their committee immediately selected Benjamin Hallowell as the builder, advancing him two thousand pounds for timber and materials. Hallowell began the hull on 20 July; however, on 31 July, Lieutenant Governor Phips had to order the sheriff to impress six carpenters to assist with the work. The shortage of available shipwrights, especially on such short notice, was probably due to the many privateers being outfitted at the same time. The 180-ton, snow-rigged *Prince of Orange* was launched on 26 August 1740 in front of a large crowd, having been completed in a record thirty-two days, five of them rainy. In September, an additional £3,500 was appropriated for guns and supplies. She mounted sixteen six-pound guns and probably as many swivels, and normally carried about seventy-four men. She is considered by one author to be the first American naval vessel to engage in battle. In 1745, the *Prince of Orange* went down in a storm, taking all fifty Marblehead seamen with her, the only vessel lost around the time that Massachusetts and British forces captured the fortress at Louisbourg.[43]

Family tradition and letters dating from the French and Indian War, discussing financial drafts on the Navy Board, suggest Benjamin Hallowell was an agent or contractor for the Royal Navy in Boston. While more research may confirm his status with the home government, Hallowell's strong connections with the British Navy endured for several decades. In 1747, the Admiralty, against sharp opposition from the Navy Board, decided to award four shipbuilding contracts to the colonists, partly in reward for their victory at Louisbourg in 1745 and possibly for economic reasons. The board's objections were multifaceted and included fear of unseasoned American timber, the annoyance of shipping all the naval appurtenances from England, and the lack of supervision from a distance. Consequently, the Admiralty sent overseers Henry Wallace and Robert White to New England to supervise the building. Originally, two forty-four gun ships and two twenty-fours were planned, but in the end only one of each size was built, apparently due to the refusal of yards in New York and Connecticut to work with the home government. Benjamin Hallowell, recommended by the recent war's naval commander Admiral Warren to build one of the forty-fours, chose instead to build the 28- to 30-gun *Boston*. Launched 4 May 1748 and variously described as 555, 561, or 600 tons, her completion was delayed five months by a late arrival of naval stores from England, keeping the shipyard's joiner at work until early November. Her first duty, under the command of Edward Wheeler, was to convoy a merchant fleet to the West Indies in the fall of that same year. The last time she was sighted in Boston was in August 1749, when she came in from Nova Scotia on her way to London, under the command of Captain Pearle. In February 1750, the Boston press proudly printed accolades from the Navy Yard describing Hallowell's *Boston* as "the completest ship of her rate in the Royal Navy," a well-sounding, but commonly used phrase. She would have been a swift vessel due to her displacement and sharp hull design, a change likely made by Hallowell, as private yards were not obliged to follow British Admiralty plans in every detail. Despite appearances, HMS *Boston* was reportedly scrapped in 1752 due to green timber failure, in a perhaps premeditated condemnation.

Portsmouth shipwright Nathaniel Meserve, through the patronage of William Pepperell, commander of New England's land forces in the recent war, was commissioned to build the second vessel. His 862-ton, 44-gun ship *America*, launched 4 May


Deptford Yard 31 June 1768
CURATOR
4521
Sultana
Box 64
The Draught of his Majesty's Schooner Sultana, her Body taken off in Mr. Bendall's Dock, and as she was fitted
Length on the range of the Deck..........50.6
Keel for Tonnage..........38.5/8
Breadth Extream..........16.0½
Depth in Hold..........8.4
Burthen in Tons 52 20/94

Lines profile of the schooner *Sultana* built by Benjamin Hallowell in 1767. Courtesy of the National Maritime Museum, London.

1749, was renamed the *Boston* in 1752 and finally sold as unserviceable in 1757. Chapelle stated the average life expectancy of a British-built man-of-war was only ten years at this time, although many American-built merchant vessels remained in use for over twenty-five years. However, there is also strong evidence, at least in the case of the *America,* that the Admiralty bent under political pressure and deliberately condemned the vessel as soon as she reached England. On the one hand, it is difficult to believe that Hallowell or Meserve built defective vessels for such a patron. However, few American yards could afford to stockpile large quantities of seasoned timber, and therefore used green wood, especially for overseas contracts. The Royal Navy steadfastly maintained English white oak was of superior quality to all other timber, including American white oak, thereby promoting their own workmanship over all foreign competition. Whether these two American vessels were truly deficient or the victims of British naval interdepartmental intrigue, they ended any further Admiralty interest in building large vessels of force in America. Despite the unfortunate demise of the *Boston,* there is evidence that Benjamin Hallowell maintained a contractual arrangement with the Royal Navy, possibly as a center for repair in New England. An account from the shipyard's joiner Samuel Holland, who worked on the *Boston,* shows a list of other Royal Navy vessels in Hallowell's yard between May 1747 and November 1748. Among the legible names were HMS *Canterbury* of sixty guns, HMS *Lark* of forty guns, HMS *Allbour,* the *Comet Bomb,* and the former French thirty-gun prize ship *Bien Aimé,* known to have been in Boston at this time.

Between work on His Majesty's vessels, Samuel Holland worked on such colonial merchantmen or privateers as the ship *Louisbourg* and the schooners *Achilles* and *Unicorn*.[44]

Hallowell received private commissions from England during this same time period. A July 1748 order survives from a London client known only by the initials P. H., addressing Hallowell as if he knew his work, possibly through naval contracts. The client wanted a 200-ton frigate built for his own use, to carry about 255 hogsheads of sugar, but with enough headroom between decks to carry slaves. He specifically requested "the best seasoned timber for a good sailing vessel, of good breadth, hansome round side and good sheer." He asked Hallowell to work with the vessel's commander on the dimensions and, although this letter appeared to be a direct contractual arrangement, the client left the overview of the contract to Messrs. Bowdoin and Flucker of Boston. Colonial merchants charged a five-percent commission if a British correspondent ordered a ship through their firm, expecting them to act as local overseers. Hallowell's son (probably mariner Captain Benjamin Hallowell Jr., who was in London that summer) had assured the client the vessel could be ready by December. Although it is likely most of the yard's work originated with contracts, refits, and repairs, Hallowell apparently produced an occasional vessel on speculation or was forced to offer work from canceled agreements. Among a number of 1744 newspaper advertisements that offered newly completed hulls was one from Benjamin Hallowell describing "a 266-ton ship, measuring 75′ by the keel, 26′ by the beam, 11′10″ in the hold, 4′10″ between decks and a 4′ waste." These open market advertisements coincided with a war-depressed economy, and may indicate shipbuilders were hoping to entice prospective privateersmen keen on targeting the French, who had just entered the ongoing war. By the end of the decade, Massachusetts traders were also recoiling from a paper money deflation coupled with angry confusion over a new silver-based currency. The new notes would eventually stabilize the colony's monetary situation, but the immediate effects were chaotic and added another layer of difficulty in credit relations.[45]

PETITIONING AGAINST THE TIDE

In 1742, the leading merchants of Boston began to focus on the fact that trade and labor were moving into surrounding communities due to the high cost of living in New England's capital. Shipwrights were among those who petitioned the government seeking redress from Boston's steep taxes and declining economy. Fear spread early that year when it was reported that only two shipbuilding orders had come in, compared with the forty contracts received in 1735. While more orders arrived during the year, the initial alarm reflected a real and growing concern. In their petition covering the lowered trade with the West Indies and London, Boston's merchants stated that "the greatest advantage this town reaped from that trade was by shipbuilding which employed most of our tradesmen." They also cited the increased tax burden caused by the departure of numerous artificers, which decreased the available poll-tax base. The industry's migration to cheaper locations may have been spurred by the higher wages reportedly paid to Boston's workers, known to be the best maritime artisans in Massachusetts. In a more urgent draft to Boston's representatives in 1744, the merchants demanded a tax rebate, noting shipbuilding had nearly ceased, and pleading that "Our trade and commerce has gone to other maritime places in this Province where it is well known [that] foreign commerce and navigation are greatly increased." They complained of losses in the fishing-supply and carrying trades due to the lower cost of operating outside of Boston, adding the "ancient and almost only manufacture [shipbuilding] the town of Boston ever had," was now centered in Newbury. The merchants estimated Boston's sea-trade losses for the previous year at two hundred thousand pounds (Massachusetts currency, old tenor rate).

In 1752, the economic crisis deepened during a widespread and long-lasting outbreak of smallpox, which eventually took 569 Boston lives. Benjamin

Hallowell's household, now increased by his brother William's orphaned children, was quarantined during the early months of the epidemic. Commerce was further disrupted as inhabitants closed their doors and fled from town into the surrounding countryside. A 1753 town report to Lieutenant Governor Phips stressed the seriousness of the decline, again emphasizing shipbuilding. Their petition stated that "not less than 5-6,000 tons of shipping were built [of old] annually in this town and the larger sorts of ships till lately were almost wholly built here." Noting the migration of shipbuilding workers, they complained that Newbury now built three-quarters of the province's vessels. Dr. William Douglass, contemporary Boston physician and commentator, blamed Governor Shirley's faulty government and galloping consumption for the business community's problems. However, he did acknowledge that Boston-built vessels were better than those launched at Newbury, due to frequent inspection by knowledgeable merchants and shipmasters, and recorded the shipbuilding trade supported thirty related denominations of tradesmen and artificers. Douglass's supporting statistics on the decline began with a reported forty-one vessels or 6,324 tons launched in Boston in 1738, dropping to thirty vessels in 1743, twenty in 1746, and only fifteen vessels or 2,450 tons in 1749. Using his conservative totals, his figures amount to a sixty-three percent drop in the number of vessels constructed and a sixty-one percent drop in tonnage over an eleven-year period. These close percentages probably indicated that Boston yards continued to build fairly large vessels, which is supported by the average 165-ton size of those launched in 1749. James Birket confirmed that Boston built the best ships in North America, but ascribed the rising cost of building to the transportation of timber from increasingly far away. While traveling through Newbury in 1750, Birket counted twenty-three vessels on the stocks during his one-month visit, which clearly supported Boston's jealous claims.[46]

Benjamin Hallowell, known for his care and concern of the business community, may have represented the town's shipwrights on these petitions, for in 1749, he was again heralded in a Masonic poem, this time as "Sage Hallowell of Public Soul." He was, indeed, their spokesman in 1756 for a committee report compiled and sent to the General Court asking for tax relief. The committee, which included two merchants, a baker, distiller, cooper, leather tanner, and the shipwright Benjamin Hallowell, cited not only the loss of the leather and sugar industries, but also the migration of several wealthy persons to towns where taxes were one-fifth of Boston's. Due to the position held by shipbuilding in the town's economy, Hallowell's portion of the report was especially telling. He compared the output of Boston's shipyards for twelve-month intervals between 1747 and 1748 and between 1755 and 1756, remarking that "the Trade in town has always been in proportion to the number of ships built" and in some previous years fourteen thousand tons of shipping had been launched. Not only had the tonnage declined from 10,140 to 2,162 tons in eight years, but ten of the earlier nineteen shipyards had apparently gone out of business. With this seventy-nine percent drop in building, it is a wonder that even nine yards had survived. Computed at £8 per ton in 1748 and £12 per ton in 1756, this amounted to a loss of over one hundred thousand pounds per year in this pivotal Boston industry. Between 1755 and 1756, several surviving yards appear to have built only one or two small vessels. Hallowell's yard produced the highest amount by tonnage in both periods, 1,200 and 470 tons respectively, although his yard was clearly operating below capacity. It is not surprising, given this environment, that Hallowell chose not to advance any of his sons in the shipbuilding trade. The family probably survived during this decline by increasing their transcontinental trading and land speculating. Hallowell's eldest son Benjamin Jr. (III) was a mariner and later a customs officer, Briggs was a shipper and broker, Samuel removed to Jamaica to try planting, and son Robert assisted the family operations before following his eldest brother into the custom's service. Although Benjamin Hallowell II failed in his attempt to establish a fishery in Boston during the 1750s, the family owned at least three fishing schooners working the Newfoundland banks and were operating as many as ten vessels in foreign trade, ranging from 75-ton sloops and schooners to 300-ton ships.[47]

The economic condition of Boston did not improve in 1757 when New England was drawn further into the French and Indian War. Massachusetts, again active in assisting the British with military strategies, began looking to her own defensive preparations. Although the new provincial coast guard ship was constructed by the Boston yard of John Ruddock, Benjamin Hallowell was one of the merchants who put up the capital to build her. The 430-ton, 26-gun *King George,* as she was called, was also commanded throughout the war by Hallowell's eldest son, Captain Benjamin Hallowell Jr. Several family vessels were leased to the province as transports, and the Hallowells were involved in some capacity with the privateer vessels *Wasp* and *Hertford.* The family shipyard remained operational despite a flood of war bankruptcies, which took down several shipbuilders along with major merchant houses. On 24 May 1758, Hallowell launched the 644- to 680-ton frigate *Pluto,* built for Hollis Saunders and Company, one of the family's merchant contacts in Bristol, England. She was the largest American privateer built during the war, designed to carry thirty-six to forty guns, and news of her launch carried as far as Philadelphia, where the press rated her equivalent to a Royal Navy frigate. The *Pluto* carried fifty men and ten guns when she left Boston Harbor in November 1758 to convoy five or six vessels to the West Indies. Several of the family's larger merchant ships were probably launched in their own yard around this time, such as the 320-ton ship *Alexander,* built in 1756, and the 6-gun, 230-ton ship *Benjamin and Samuel,* built and registered in Boston in 1760.[48]

In the midst of this depression induced by taxes and war, Boston received a serious blow in March 1760, when a devastating late-night fire swept through the town. The fire destroyed at least 349 buildings, left 220 families homeless, and consumed numerous businesses as it fanned down one of Boston's main streets to the waterfront. Although estimates of the total damage varied greatly, the committee of Selectmen and Overseers of the Poor computed the real estate loss at around £43,103 lawful money of New England or £37,327 sterling, based on the records of assessors. Amazingly, the blaze caused no loss of life; however, most sufferers were never fully compensated for their property destruction. The Hallowells lost their mansion on Batterymarch Street and many personal effects; assessed at over £2,000, their property damage represented one of the higher real estate totals. Joshua Winslow's ship *Sally,* valued at over £700, burned where she was docked, awaiting repairs or unloading in the Hallowell yard. In their neighborhood, only Oliver's house was left standing near Fort Hill, together with tenements beside their own shipyard. This devastating event caused Boston to stiffen and enforce its building codes and review street widths and layouts. Within two weeks, the first residents, including Benjamin Hallowell, applied to rebuild their homes. The town held lengthy hearings about widening the portion of Batterymarch Street that separated the family estate from the waterfront. This action prompted Benjamin Hallowell to redesign the streets in the neighborhood, presumably to protect his access to the waterfront. His 1764 drawing still exists, showing a new street running from Milk Street directly to his front door and bypassing the water's edge altogether. Hallowell's plan, although never implemented, foreshadowed the road and waterfront alterations that would eventually take place some forty years later.[49]

Eclipsed by History

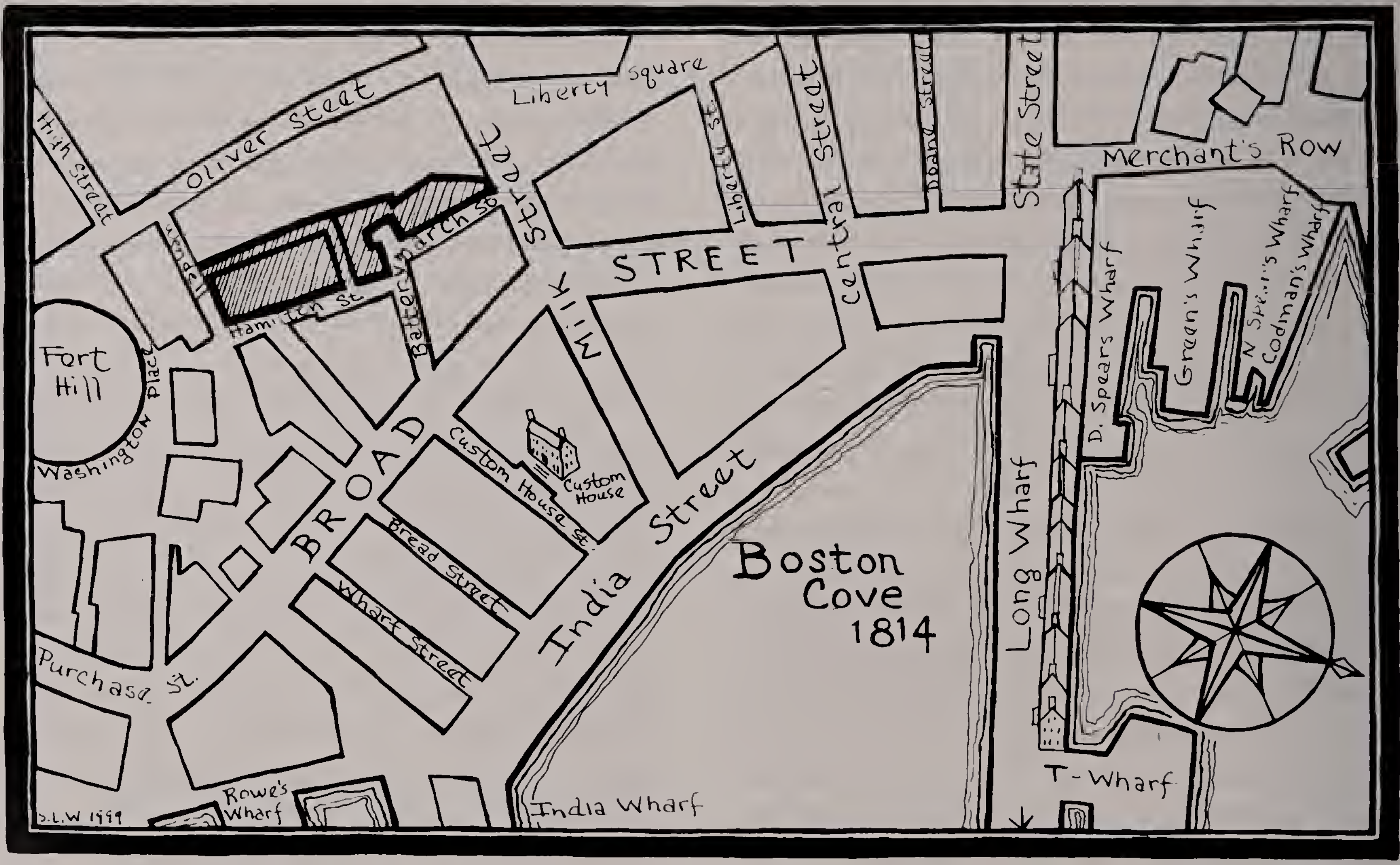
The family shipyard apparently kept busy in the decade before the Revolution, despite the growing storm among the merchant community. As late as 1763, a Hallowell pole-masted sloop called *Bird* was purchased from the Thames dock by the Admiralty for surveying Ireland's west coast. American sloops were known to be agile in coastal waters, some might claim due to decades of smuggling experience. Great Britain purchased a number of fast 90- to 116-ton, Marblehead-type schooners from New England builders beginning in 1764. These swift schooners were used for various coastal duties including the greatly disliked customs service. A beautiful 52-ton schooner named *Sultana* was launched by Hallowell in the summer of 1767 and freighted for a one-way trip to London on her way to becoming the latest in this group of American schooners in the king's service. She was purchased by the navy from the Deptford dockyard as a dispatch boat and small transport, meaning she "must have had a fair turn of speed." The mounting for a figurehead and other carved elaborations seen on the Admiralty draft show the *Sultana* was a more finely finished vessel than most colonial merchantmen. Newspaper readers were reminded she was Hallowell-built when she came in to Boston in late 1768; however, being in His Majesty's employ probably did not carry the same endorsement it might have in earlier decades.[50]

That same summer, John Hancock's sloop *Liberty* was seized at the docks in Boston for trade violations, causing a riot that injured the participating customhouse officers, including Comptroller Benjamin Hallowell Jr. Robert Hallowell, appointed deputy comptroller while his brother was sent to England to report on events, also supervised payments to his father's shipyard, which refitted the *Liberty* as a customs cutter in 1769. This would hardly have added to the family's popularity, and the fact that HMS *Romney*'s men did the work only added to the level of the town's disapproval. Ongoing strife among members of the American Board of Customs Commissioners in Boston caused an accusation to be leveled at the shipyard for overcharging the refitting costs. In an anticustoms jibe, the press suggested the town's tradesmen would have outfitted the *Liberty* for less than the navy had charged. However, it is unlikely that any self-respecting Popular Party man would have offered his services for this particular job. The customs sloop *Liberty* came to her perhaps predictable end after only a month of cruising in this volatile period, when she was seized and destroyed by a Rhode Island mob.[51]

John Rowe's famous diary mentions a ship launched by Hallowell in September 1769, and a mid-1773 receipt indicates the yard's last vessel may have been the *Ajax,* completed for merchant James Warden. Benjamin Hallowell's estate accounts show the names of many suppliers and artisans employed by the shipyard in the early 1770s, which implies he was building right up until his death. These include timber merchants Daniel Chickering, Richard Bacon, Joseph Draper, John Eaton, and J. Ellis; sawyers William Lamphier and Patrick Kenney; ship joiners John Holland and Thomas Uran; caulkers Alexander Baker, Benjamin Gallop, John and Henry Truman, and Daniel Ingersoll; mastmakers Cushing and Neal; and boatbuilder Joseph Newhall. Account entries with Joseph Gerrish show that Benjamin Hallowell was also supplying the now unpopular fleet of the king's ships stationed in Boston Harbor.[52]

Benjamin Hallowell died on 30 January 1773 and was buried in a black walnut coffin built by his friend and neighbor John Holland, the shipyard's joiner. Hallowell's passing, as predicted by his son-in-law, brought the Hallowell shipwright dynasty to a complete and abrupt halt. The American Revolution would likely have brought about the same finale for this long line of early Massachusetts entrepreneurs. While his Loyalist sons, Benjamin and Robert, were forced into exile in 1776, there has been speculation about which side of the political fence the elder Benjamin might have chosen. The hardship of leaving his home might have persuaded him to stay in Boston and ride out the consequences, although it is doubtful he could have sustained a quiet semblance of neutrality. We will probably never know, but based on the political positions of his sons, friends, and associates, Benjamin Hallowell was more likely to have become a loyalist. With the exception of the radical *Boston Gazette,* which ignored his passing, Boston's newspapers carried lengthy obituaries of Hallowell. The *Boston Evening Post* described him as "a worthy citizen and a loyal subject, inviolably attached to his King." That Hallowell was popular in Boston can perhaps be inferred from reading further: "To his country a zealous asserter of civil and religious privileges; hospitable and benevolent to mankind, open and undisguised in heart [and] warm and unshaken in friendship." The *Massachusetts Gazette* described him as a "man of strong natural abilities, which he had improved to a large stock of useful knowledge. In his business he was active and industrious, in his dealings faithful and upright. . . . He was a valuable citizen and a friend to the true Constitutional liberties of his Country." The town had lost not only a hardworking citizen, and one of the more colorful members of this old Boston family, but perhaps its most famous shipwright. In February 1773, the family executors placed advertisements in the newspapers offering to sell the remaining shipbuilding timber and the ropewalk. The shipyard itself was put up for lease the same month.[53]

Benjamin Hallowell's will remained unprobated for over thirty years due to the exile of his two executors, sons Benjamin and Robert, and the complexity of his estate, which encompassed lands in Boston, western Massachusetts, New Hampshire, and over fifty thousand acres in Maine. The town of Hallowell, Maine, was named for Benjamin in 1770, because he held that portion of the Kennebec Proprietors' grant. The shipyard property, valued in 1773 at £600, was left to his eldest son, Benjamin. The mansion house and land, valued at £1,100, went to the youngest son, Robert.[54] However, all profits from the estate were assigned to their mother, Rebecca Briggs Hallowell, who removed to London with son Benjamin and survived her husband by another twenty years. Massachusetts could not legally confiscate the property because it was owned by a widow "absentee," and during the Revolution, the executors were forced to manage the estate from England. As the port of Boston was a key refitting station for America's naval forces, the Hallowells's former yard may have been used to repair both American and French vessels. Surviving 1780s accounts with their Boston agent William Foster show



Boston Cove around 1814 following the Broad Street development and wharf extensions. This was drawn by Sandra Webber and based on the 1814 John G. Hales map of Boston and family deeds. Courtesy of Sandra Webber.

the names of those renting the shipyard and mansion. Mastmaker Benjamin Cushing occupied the larger part of the yard for many years, paying an annual rent of £92. However, in 1799, Robert Hallowell transferred the lease to mastmaker William Hinckling, due to Cushing's slow payments and abusive personality. Shopkeeper Hopestill Capen, William Clarke (shipwright?), William Miller, and others occupied another portion of the property, but also paid their rent of £46 infrequently. The government leased the family mansion to arch-patriot Samuel Adams from the summer of 1776 through August 1784, and the executors grudgingly accepted that Adams never paid the £30 rent or took care of the building. After recovering their father's property from the government in 1784 and paying nearly £400 in repairs, the Hallowell mansion was rented until 1789 to Joseph Coolidge for £70 to £120 per year. In 1785, the ropewalk finally sold to Joseph Russell of Boston, but the entire legacy was entangled as collateral in 1786, when the two executors were held responsible for their deceased patriot-brother Briggs's outstanding debt to a bankrupt Bristol merchant house. Working through attorneys in London and Boston, the executors and other family members removed this lien in a complex transatlantic payoff.[55]

Robert Hallowell, the younger executor, returned to Boston permanently in 1790, taking up residence in the family mansion on Batterymarch Street. Robert did not finalize the work on his father's complicated estate, despite pleas from his relations, most then living in England. Robert's older brother Benjamin, considered by the family to be more industrious, was banned from returning to America under a Bill of Treason due to his last-held position on the Board of the American Customs Commissioners, and did not see Boston again until 1796. However, even his presence did not complete their father's estate business, which fell to the next generation in the early nineteenth century. During the 1790s, the mansion was mortgaged a number of times until it was finally sold in June 1804 to Rufus Greene Amory for twenty thousand dollars. The same month the shipyard was purchased as an investment by Uriah Cotting, a member of the Broad Street Association, for forty thouand dollars. This left Robert Hallowell with a group of shops and tenements along an adjoining wharf, which he leased to shipwrights Webber and Page, wharfinger William Voze, and mastmaker Benjamin Hooton. Nine months later, the Hallowell shipyard was resold by Cotting when the Broad Street Association bought up eleven parcels of Boston's South End shoreline for $114,000 in order to extend the waterfront roads and wharves farther into the harbor. These prices would seem to justify the first William Hallowell's eighteen-year-long lawsuit to hold onto his legacy, as well as his grandson Benjamin's efforts to reunite the estate during the eighteenth century. Unfortunately, there were no Hallowell shipwrights in the next generation to reestablish the family business. Facing Boston's earlier manufacturing decline, the Hallowells had made an irrevocable decision to stop training family members in the trade, leaving them no future in the new country's shipbuilding industry. Family members who returned to America continued with merchant shipping and other economic enterprises, settling in Boston and along Maine's Kennebec River, where their descendants still reside today. The family boldness and maritime ability passed to Commissioner Hallowell's younger son, Royal Navy captain and later admiral Benjamin Hallowell (IV), a trusted commander and friend of Admiral Nelson during the Napoleonic Wars. Although to this day, the seventeenth-century Ward-Hallowell house lot is still outlined by its original streets, the historic shipyard of the famous Hallowell family builders passed from existence with the first wave of Boston's nineteenth-century harbor redevelopment and expansion. Perhaps the early Hallowell shipwrights would have found it fitting that their shipyard was sacrificed for the improvement of Boston Harbor's economy.[56]

ACKNOWLEDGMENTS

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NOTES

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2. George F. Dow, "Shipping and Trade in Early New England," *Proceedings of the Massachusetts Historical Society* 64 (1930–32): 187; Henry Hall, *Report on the Shipbuilding Industry of the United States* (Washington, D.C.: U.S. Department of the Interior, 10th Census Monograph, 1884), 8:48; Sidney Perley, *The History of Salem, Massachusetts* (Salem, Mass., 1924–28), 1:380; J. Leander Bishop, *The History of American Manufactures, 1608–1860,* 2 vols. (Philadelphia: Edward Young, 1861–64), 1:57; William H. Rowe, *The Maritime History of Maine: Three Centuries of Shipbuilding* (New York: Norton, 1948), 34; and William R. Carlton, "New England Masts and the King's Navy," *New England Quarterly* 12 (1939): 7.

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4. Quotation from Child's *A New Discourse on Trade* in Goldenberg, *Shipbuilding,* 23; and William Whitmore and William Appleton, eds., Randolph Report, *Hutchinson Papers,* 2 vols. (Albany: Joel Munsell for the Prince Society, 1865), 2:232.

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6. Samuel E. Morison, *Maritime History of Massachusetts, 1783–1860* (Boston: Houghton Mifflin, 1921), 18–19; Bishop, *History of American Manufactures,* 47; Thomas Barrow, *Trade and Empire: The British Customs Service in Colonial America, 1660–1775* (Cambridge, Mass.: Harvard University Press, 1967), 101; and "Description of Boston" (reprinted from Rev. Moore's Gazetteer), BRC report, 10:218–19.

7. Hill, Hamilton H., *Trade and Commerce in Boston, 1650–1840* (Boston: Damvell and Upham, 1845), 41; *Report on the Shipbuilding Industry,* 41; Bishop, *History of American Manufactures,* 90; Goldenberg, *Shipbuilding,* 52; Joshua Gee's 1729 *Trade and Navigation of Great Britain,* quoted in Bishop, *History of American Manufactures,* 89; and December 1729–December 1730 shipping clearances, *Boston Newsletter,* 4 March 1731. Clearance totals are probably customhouse or naval office records. A margin of error should be allowed, as the published tallies contain several errors, and omissions may have occurred through lack of information, to save space, or to enhance Boston's position in the listing.

8. Hall, *Report on the Shipbuilding Industry,* 62–63, 110; Howard I. Chapelle, *Search for Speed under Sail, 1700–1855* (New York: Norton, 1967), 140–41; Morison, *Maritime History,* 34; Hill, *Trade and Commerce in Boston,* 102; Boston directories for 1789 and 1796; BRC report 10; and William A. Fairburn, *Merchant Sail* (Center Lovell, Maine: Fairburn Marine Educational Foundation, 1944–50), 5:2897.

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14. Butler, *Butleriana,* 9–10; Goldenberg, *Shipbuilding,* 15; *Gleaner* articles, BRC report 5:12–13; BRC report, 2:120; and Suffolk deeds, 3:454, 7:216.

15. Samuel E. Morison, ed., *Records of the Suffolk County Court, 1671–1680,* 2 vols., in *Collections of the Colonial Society of Massachusetts* 2 (1933): 1031–32; William A. Baker, *Colonial Vessels: Some Seventeenth-Century Sailing Craft* (Barre, Mass.: Barre Press, 1962), 111, 116, 142; and BRC report, 32:309.

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17. *Boston Looks Seaward: The Story of the Port, 1630–1940* (Boston: U.S.W.P.A. Writers Project, 1941), 23; Boston Births, Baptisms, Marriages, Deaths, 1630–1699, BRC report, 9:43, 46, 54; and Morison, *Suffolk County Court,* 2:1030. Early genealogical compendiums often confuse William Hallowell with William Halloway of Taunton, Massachusetts, who relocated to Boston in 1650.

18. Morison, *Suffolk County Court,* 2:1029–31; BRC report, 2:142; Suffolk files, 22:1911; Suffolk deeds, 18:186; Butler, *Butleriana,* 19; and Hugh Morrison, *Early American Architecture from the First Colonial Settlements to the National Period* (1966; reprint, New York: Dover, 1987), 71–75.

19. Boston town records, 1660–1700, BRC report, 7:18, 77, 79; Rutman, *Winthrop's Boston,* 192; and Suffolk deeds, 98:88. Future transactions show this property in Butler ownership; however, the Hallowells acquired some of the Butler land in 1762.

20. Butler, *Butleriana,* 8–19; volumes 15b, 16 (Estates: 1636–97), volumes 38b, 39, 40 (Judicial: 1640–1724), Archives; Suffolk deeds, 11:307, 18:69, 156, 98:25, 28; Suffolk files, 22:1911, 29:2416, 212:26683; John Noble, ed., *Records of the Court of Assistants of the Colony of Massachusetts Bay, 1630–1692* (Boston: Suffolk County, 1901), 140, 164, 171, 205–6, 380–82; Morison, *Records of Suffolk County Court,* 2:1029–37; and William Trask, "Abstracts from Various Wills on Record and Files of Suffolk County," *New England Historical and Genealogical Register* 18 (1864): 154–57.

21. Seventeenth-century Boston tax lists and miscellaneous appendices, BRC report, 1:39, 121; Samuel G. Drake, *History and Antiquities of Boston, 1630–1770* (Boston: Luther and Stevens, 1856), appendix 2: 802–19; and Boston town records, 1700–1728, BRC report, 8:50–51.

22. Archives, vol. 7 (Massachusetts Commercial Ship Registers). The "twelve" tons recorded for the *John and Mary* seems light for the voyage described, and was perhaps incorrectly entered. She was manned at the same level as a twenty-five-ton vessel.

23. *Narrative of Joshua Gee, 1680–1687, While He Was Captive in Algeria of the Barbary Pirates* (Hartford, Conn.: Wadsworth Athenaeum, 1943), 7–10, 22, 28; Samuel Sewall, *Letterbook of Samuel Sewall, Collections of the Massachusetts Historical Society* 1 (sixth series, 1866 and 1868): 91; and entries for 18 November 1685 and 19 March 1792/3, *Diary of Samuel Sewall 1674–1729,* 2 vols. (New York: Farrar, Straus and Giroux, 1973), 1:85, 307.

24. Hutchins, *American Maritime Industries,* 144; Suffolk deeds, 7:317, 18:168; Suffolk files, 20:1718, 1212:162176, 24:1994, 25:2055; Morrison, Suffolk County Court, 2:729, 1053; Archives, vol. 35 (Inter-Charter, 1689–90): 377, vol. 62 (Maritime, 1694–1706): 497; Howard Millar Chapin, *Privateer Ships and Sailors: The First Century of American Colonial Privateering, 1625–1725* (Toulon: 1926), 160; and Harriet S. Tapley, "The *Province Galley* of Massachusetts, 1694–1716," *Essex Institute Historical Collections* 58 (1922): 82.

25. BRC report, 7:16, 116–239.

26. Archives, vol. 113 (Towns, 1693–1729): 139 and vol. 59 (Manufactures, 1639–1773): 239–40; BRC report, 8:188; and sawmill papers: folders E-9, 10, and 12, Charles Vaughan Papers, Bowdoin College Special Collections, Brunswick, Me.

27. BRC report, 8:217; Boston Selectmen's Minutes, 1701–1715, BRC report, 11:75; Boston Selectmen's Minutes, 1716–1736, BRC report, 13:64, 121; and Archives, vol. 63 (Maritime, 1706–1740): 508, 617–19.

28. Archives, vol. 70 (Military, 1680–1703): 154; vol. 244 (Accounts, 1676–1734): 13, 19; vol. 60 (Maritime, 1671–94): 9, 46; vol. 113 (Towns, 1693–1729): 74, 463–66; and BRC report, 5:12.

29. Suffolk files, 130:14210; Suffolk deeds, 18:69, 33:83–86, 34:168–69, 35:2, 118, 53:9, 209–10; and Goldenberg, *Shipbuilding,* 59.

30. Bailyn and Bailyn, *Massachusetts Shipping,* 59; Henry J. Parker, *Index of Lodge Members, 1733–1800* (manuscript volume, Samuel Crocker Lawrence Library, Grand Lodge of Massachusetts, Boston, compiled 1886), 146; and *Ancient and Honorable Artillery Company of Massachusetts* (Boston: A. Mudge and Son, 1895), 15.

31. Suffolk deeds, 33:83–86; 34:168–69, 209–10; 35:2, 118; 47:242, 53:9–19, 48:265; 76:238, 80:225; Hill, *Trade and*

Commerce in Boston, 21; and Goldenberg, *Shipbuilding,* 93.

32. *Boston Looks Seaward,* 49; John Bonner, 1722 map of Boston; William Burgis, 1728 map of Boston; and William Burgis and William Price, *A South East View of ye Great Town of Boston in New England in America,* Graphics Department, American Antiquarian Society, Worcester, Mass.

33. Suffolk files 406:65428 and 432:70086; document #9801 1/2; and Samuel Vaughan: Letter to Benjamin Hallowell, 22 September 1759, box 3, folder 1701–69, Boylston Family Papers, Massachusetts Historical Society (hereafter MHS).

34. *Boston Newsletter,* 8 February 1739; and Suffolk files, 245:43288, 383:61262, 385:61540, 387:62033, 388:62129.

35. Goldenberg, *Shipbuilding,* 64–68; W. Jeffrey Bolster, *Black Jacks: African American Seamen in the Age of Sail* (Cambridge: Harvard University Press, 1997), 28; Suffolk files, 56:97, 73:579, 410:66142, 412:66363, 415:66843, 164:18641; Emory Washburn, "Slavery as It Once Prevailed in Massachusetts," *Massachusetts and Its Early History: Lowell Institute* (Boston: MHS, 1869), 220; *Boston Newsletter,* 24 July 1740; and *Boston Gazette,* 5 February 1754, 20 December 1748, 30 October 1758, 6 and 13 November 1758.

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53. Holland bill, box E-12, Samuel Vaughan Papers, Bowdoin College; *Boston Evening Post,* 1 and 22 February 1773; and *Massachusetts Gazette,* 1 February 1773.

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THE QUESTION OF PRE-COLUMBIAN CARIB SAILING CANOES

by Michael F. Doran, Jason Andrew Smith, Christina West, and Michelle T. Meade

Archaic foragers in two cultural traditions were able to colonize the Greater Antilles: the first group came from Central America across the Yucatan Channel to Cuba, Española, and Puerto Rico around seven thousand years ago (possibly the Ciboney people), and the second used the same route four thousand five hundred years ago (possibly the Taino people). Obviously, both groups managed this colonization by employing watercraft of some sort, probably dugout canoes. A ceramic age horticultural people commonly known as the Arawak arrived around 2500 B.P., south to north, from the delta of the Orinoco River and established themselves throughout the Lesser Antilles and Puerto Rico.[1] It is conventional today to call the native American people of the Lesser Antilles the "Island Caribs" after the expression picked up by Columbus from the Taino people of Española.[2]

Were the islands reached through paddling or sailing? No physical evidence has been detected thus far to support either alternative, but Clinton Edwards, in his survey of South American aboriginal watercraft of the west coast a generation ago, felt that the conquest-era archival documentary evidence supported a hypothesis of aboriginal Amerindian sailing both for dugouts and for rafts.[3] He had been able to document conclusively that, at the very least, there were sailing rafts in Peru and Ecuador using triangular sails and steering with centerboards at the time of European contact.[4] Nevertheless, conventional wisdom today still holds that the knowledge of sailing technology must have been imported to aboriginal societies in the West Indies and elsewhere at the time of first European contact. Until then, passages had to have been carried out by paddling. In the words of Watters and Rouse a decade ago, "no evidence has been adduced that the Indians had sails, let alone the ability to tack against the wind, as Europeans did."[5]

Anyone experienced with muscle-driven watercraft can only be impressed at this optimistic formulation of Antillean paddling. Crossing to Cuba by way of the turbulent 120 miles of the Yucatan Channel would involve the archaic foragers besting a five-knot current and, ordinarily, the easterly trade winds gusting at ten knots and up. By the same token, making the ninety miles from Trinidad to Grenada across the Grenada Passage is almost as great a challenge, for it means bucking a three-knot west-

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ward current and again the force of the trade winds. Either of these passages would be difficult even for a modern racing crew. We know that a vestige of mighty island dugout canoes was still carrying passengers and cargo daily between Kingstown and Georgetown in the lee of St. Vincent into the 1940s, a flat water distance of twenty-four miles paddled (not sailed) in about two hours.[6] However, traveling more than four times that distance in the open sea against vigorous currents of air and water would be quite another matter entirely.

The sole and controversial bit of documentation for an alleged post-contact European introduction of sailing technology comes from the early seventeenth-century memoirs of Henry Challons.[7] He participated in a voyage to the Caribbean in 1606, survived many hardships, and twenty years later published his story. According to him, when he and his

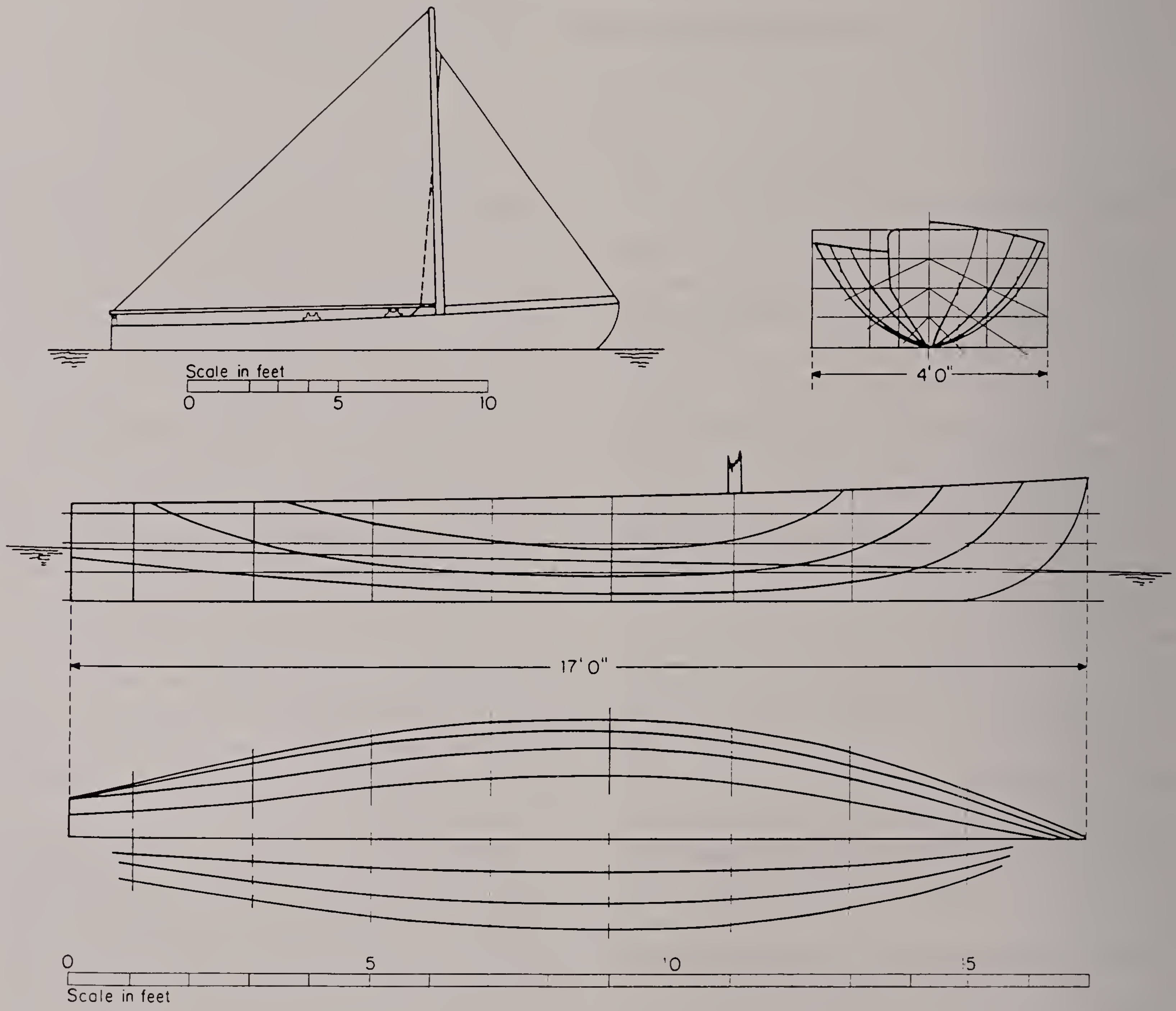

Fig. 1. Grenada dugout canoe, 1970 (after Pyle, page 16).

party visited Dominica, they found a shipwrecked Franciscan friar living among the islanders. This individual immediately came out to the ship in a canoe using linen sails for power. To the astonished Challons and his fellow adventurers, the fact that the canoe sailed out to them was as much a surprise as the linen being used as a sail. Conversing in Latin, the newcomer identified himself as Friar Blasius, lately of Sevilla but currently a slave to the Island Caribs of Dominica, the sole survivor of a group the balance of which had been murdered by the islanders. The linen had been scavenged by the Caribs from three shipwrecked galleons that foundered in nearby Guadeloupe. When asked why he had been spared when his companions were slaughtered, Friar Blasius made this explanation:

> hee did shew the Savages how to fit them Sayles for their Cannoas, and so to ease them of much labor often in rowing, which greatly pleased the Savages as appeared, for wee saw them to use sayles in their Cannoas, which hathe not beene seene before.[8]

Challons's party had not seen sails elsewhere, but they also had only just arrived in the islands a few

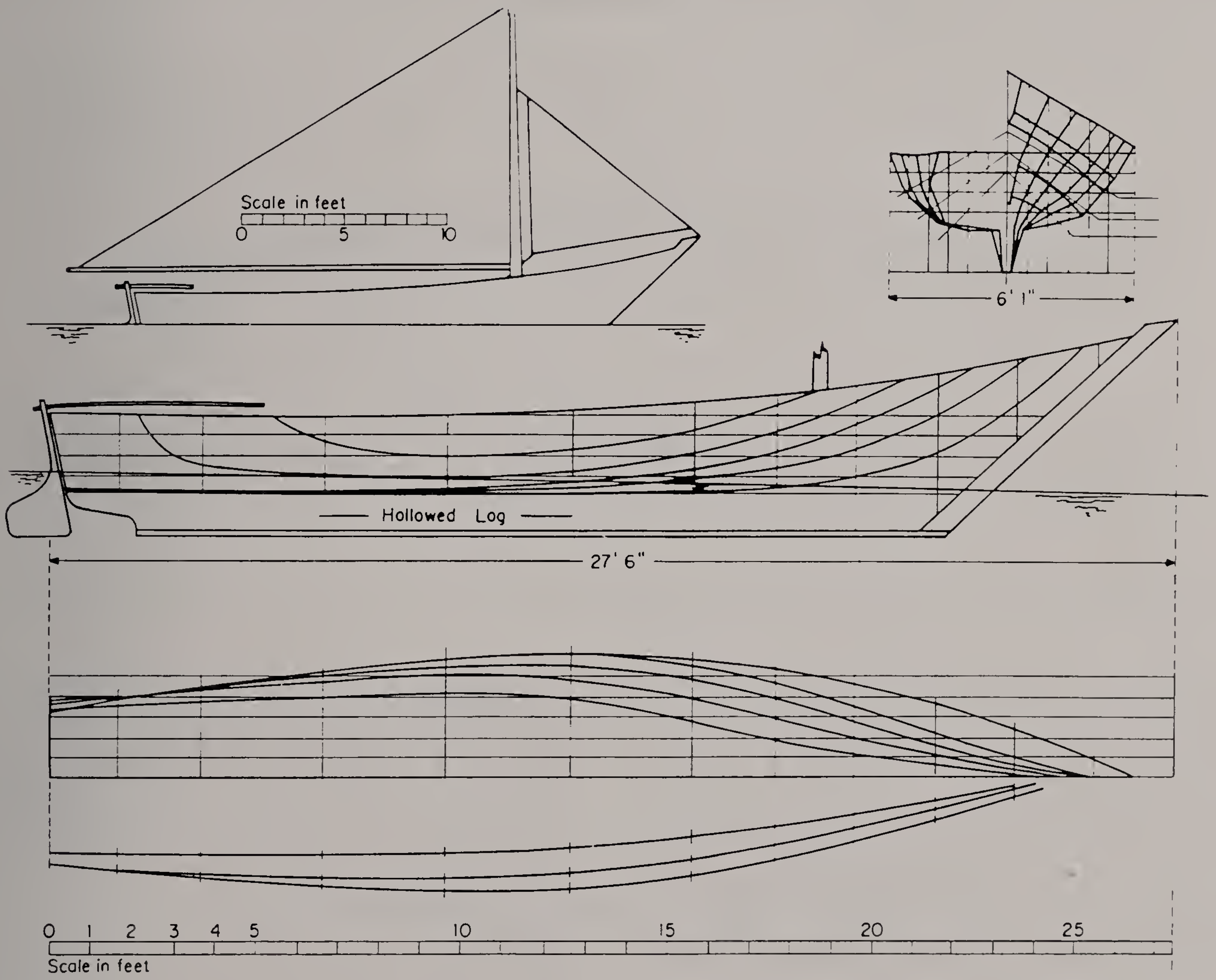

Fig. 2. Trinidad pirogue, 1970 (after Pyle, page 182).

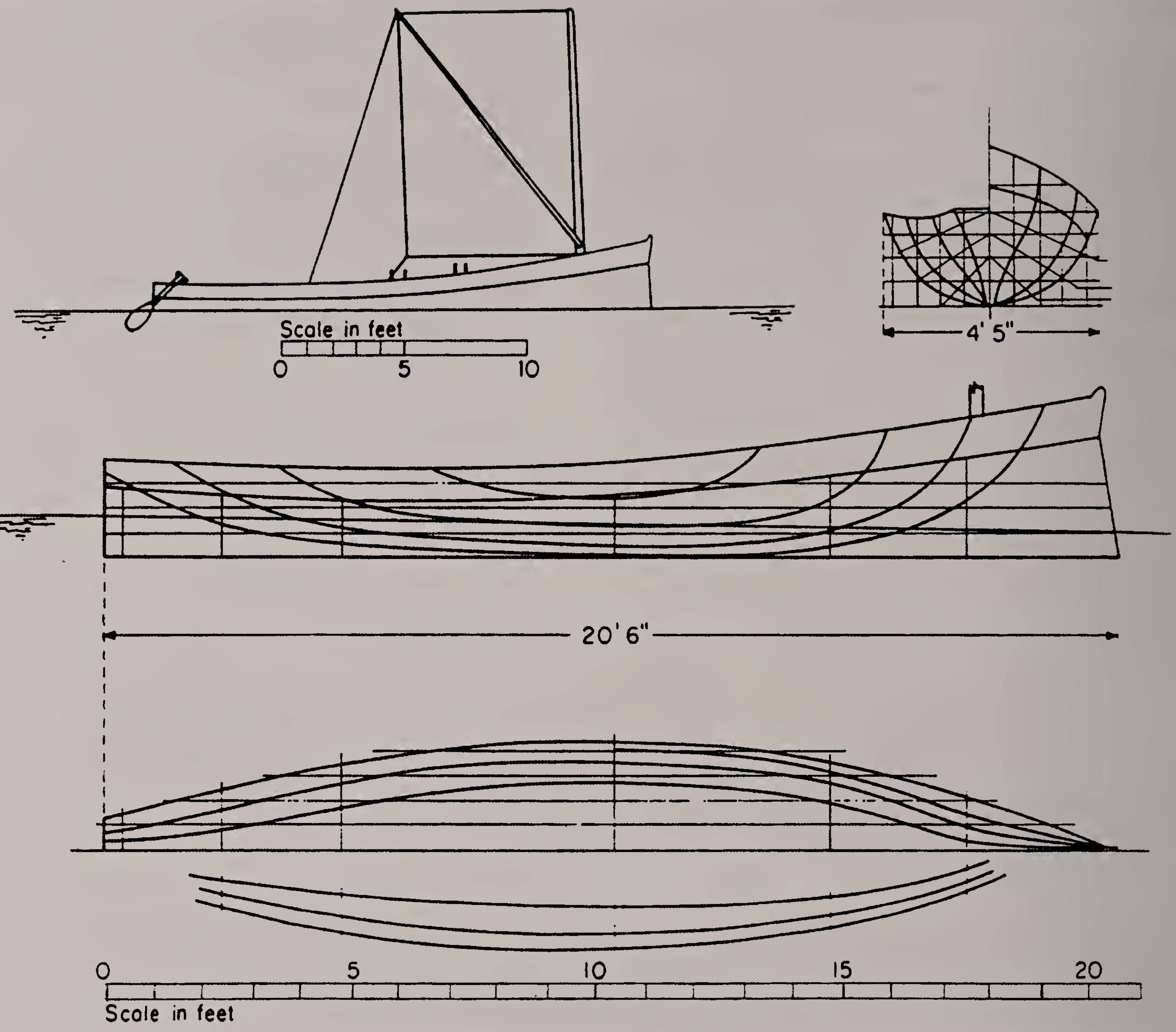

Fig. 3. Martinique gommier, 1975 (after Pyle, page 148).

days beforehand and would see little more of them before being captured by the Spaniards. The friar's words could be taken directly; however, he could have meant that he showed the Dominicans how to sew linen sails. The robustness of this source as evidence of a European introduction of sailing technology into the West Indies is highly dubious.[9]

To the contrary, a tantalizing argument can be made for pre-Columbian Antillean sailing canoes. Christopher Columbus saw canoes that measured up to nearly one hundred feet in length and six feet in width, but his writings do not specify whether any were sailed.[10] By the early sixteenth century, however, documented Antillean sailing turns up in conquest and post-conquest records. Gonzalo Fernandez de Oviedo y Valdez arrived in Panama in 1514 and later lived for many years in Española. In his *Summario de la Natural Historia de las Indias,* Oviedo mentions the Island Caribs of the windward islands specifically as accomplished "canoe sailors."[11] In 1515, Diego Velazquez de Cuellar, leader of Spanish forces in Cuba, wrote a letter to Diego Columbus in Santo Domingo with a highly interesting message: Indians recently taken as slaves from the Guanaja Islands (the modern Bay Islands of Honduras) had seized a Spanish ship anchored in the port of Carenas (modern Havana, Cuba) and then successfully sailed it home two hundred and fifty leagues. They did so against the strong current passing through the Strait of Yucatan and by beating into the prevailing easterly trade wind.[12] It is hard to imagine how a nao, or even a caravela, could have been so employed if the Indians were not already highly skilled sailors, for they certainly could not have "learned as they went." Bernal Diaz del Castillo reported seeing sailing canoes off the coast of Yucatan and later off Honduras in 1517.[13] The late sixteenth-century Motul dictionary, when compiled, included the non-Hispanic words *bub* (a sail or to sail) and *bubil* (to navigate with sails). There is considerable significance in this, since Indian groups inevitably adopted European words for items and practices that were strange to them. They retained Indian names if dealing with the familiar.[14] Finally, in the mid-seventeenth century, Carib marine technology as described in detail by Du Tertre included canoes around forty feet long, able to carry fifty persons and their luggage, which were either paddled or sailed.[15] Canoes this big suggest a longstanding maritime tradition. Thus, although we agree with Edwards that it is inconclusive, there is earlier and greater evidence for pre-Columbian Antillean sailing dugout canoes than

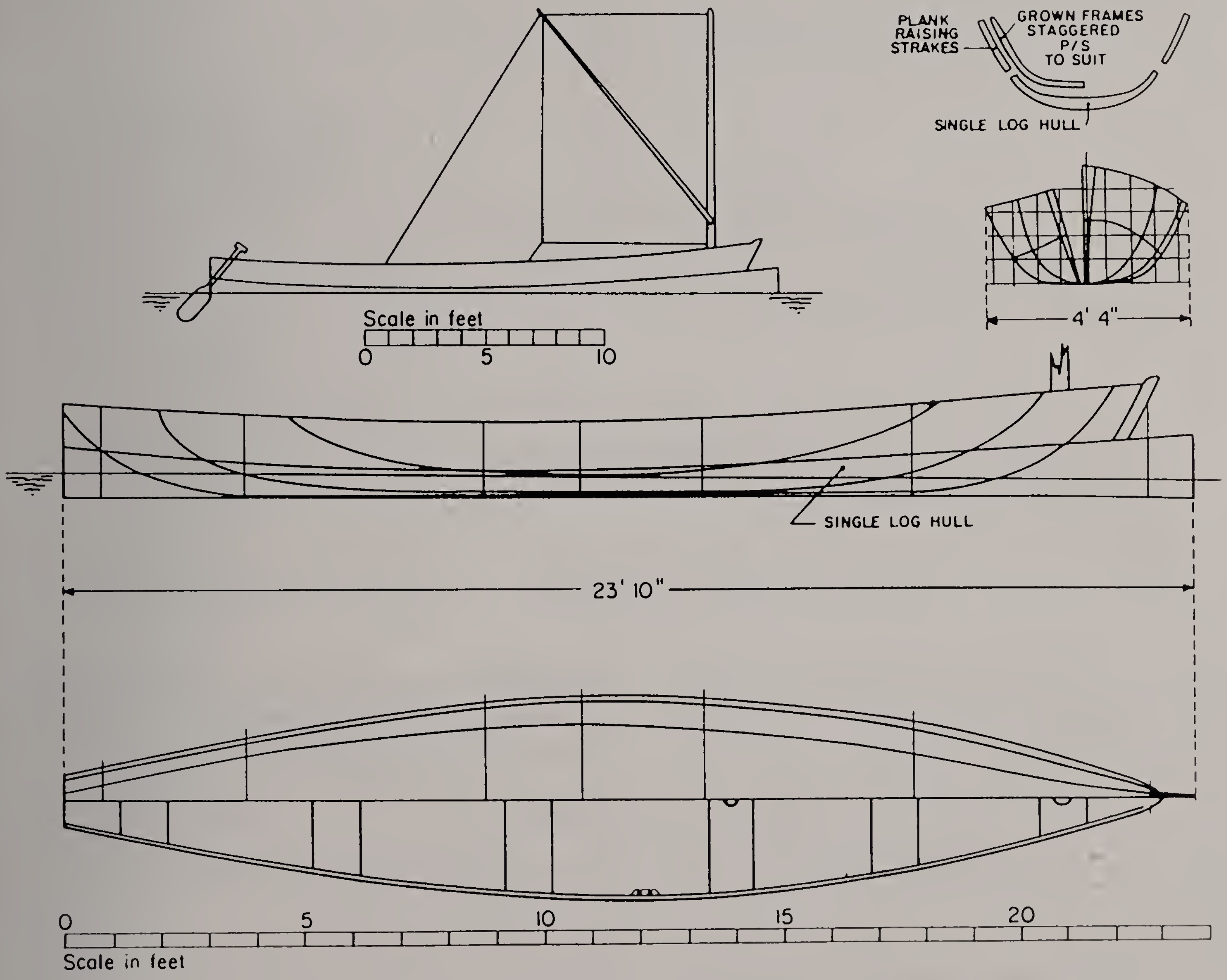

Fig. 4. St. Lucia sailing dugout canoe *St. Benedict*, 1970 (after Pyle, page 158).

evidence against them.[16] It would conclude the argument if early canoes and sails had been actually found, but this is unlikely ever to occur.

Little is known in general about the island peoples and their material culture, stemming from their fairly rapid destruction at the hands of the Spaniards and other Europeans after first contact. Through bad treatment, overwork, and eventually disease, the indigenous Ciboney and Taino peoples laboring at placer mining were experiencing population collapse in the original Spanish colony of Española even by the early sixteenth century. By royal authority, after 1503, traffickers from Española were permitted to seek slaves in islands where cannibalism was practiced. In 1511, as Jamaica, Cuba, and Puerto Rico were taken over and local aboriginal populations began to be used up, slave policy was enlarged to include all aboriginal peoples anywhere. Within a decade, the Bahamas, Turks and Caicos Islands, the Greater Antilles, and most of the Lesser Antilles were depopulated. A few Taino islanders were left in St. Christopher and Nevis; only in the domain of the

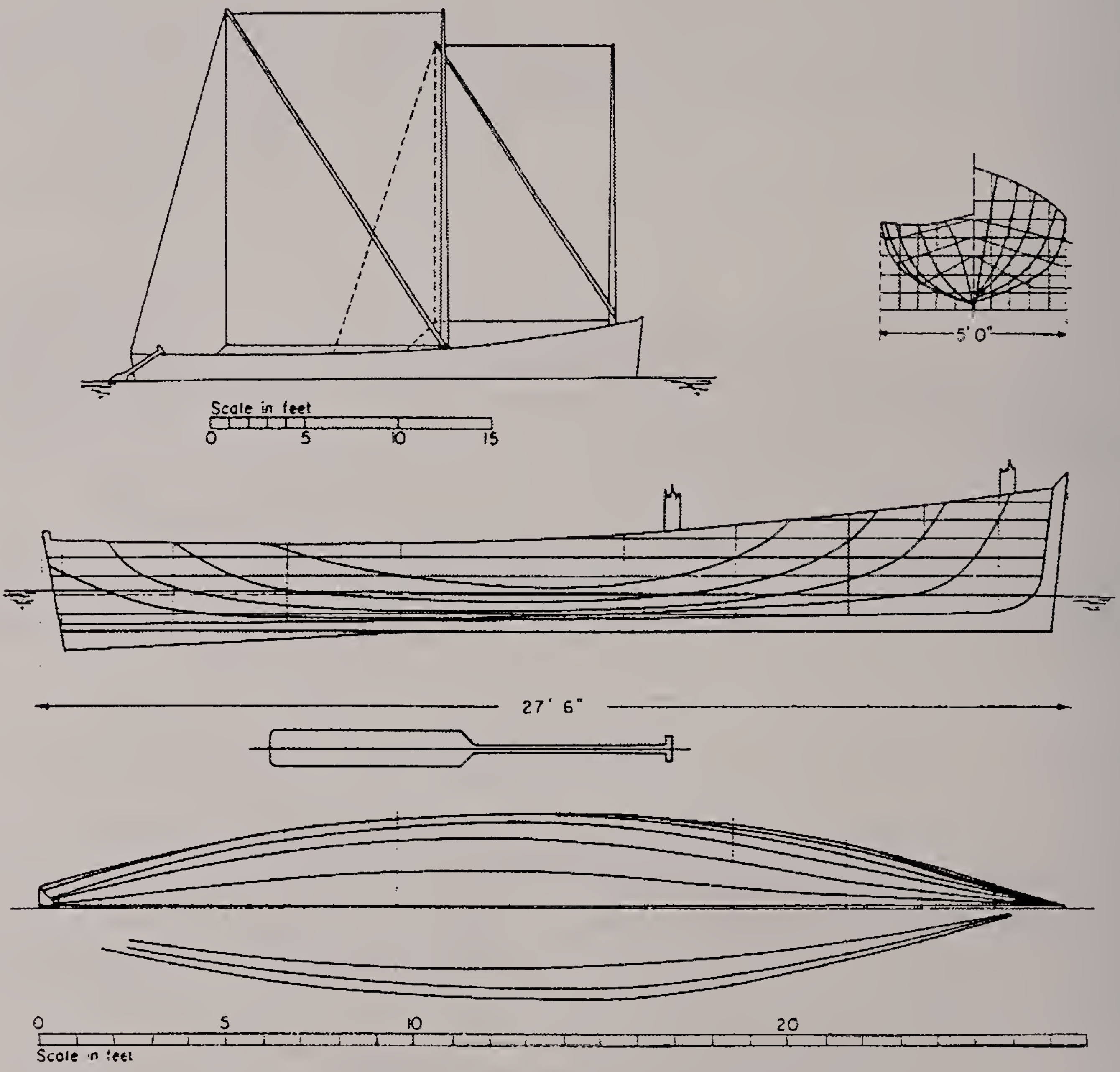

Fig. 5. Martinique racing yole *Goodyear,* 1974 (after Pyle, page 151).

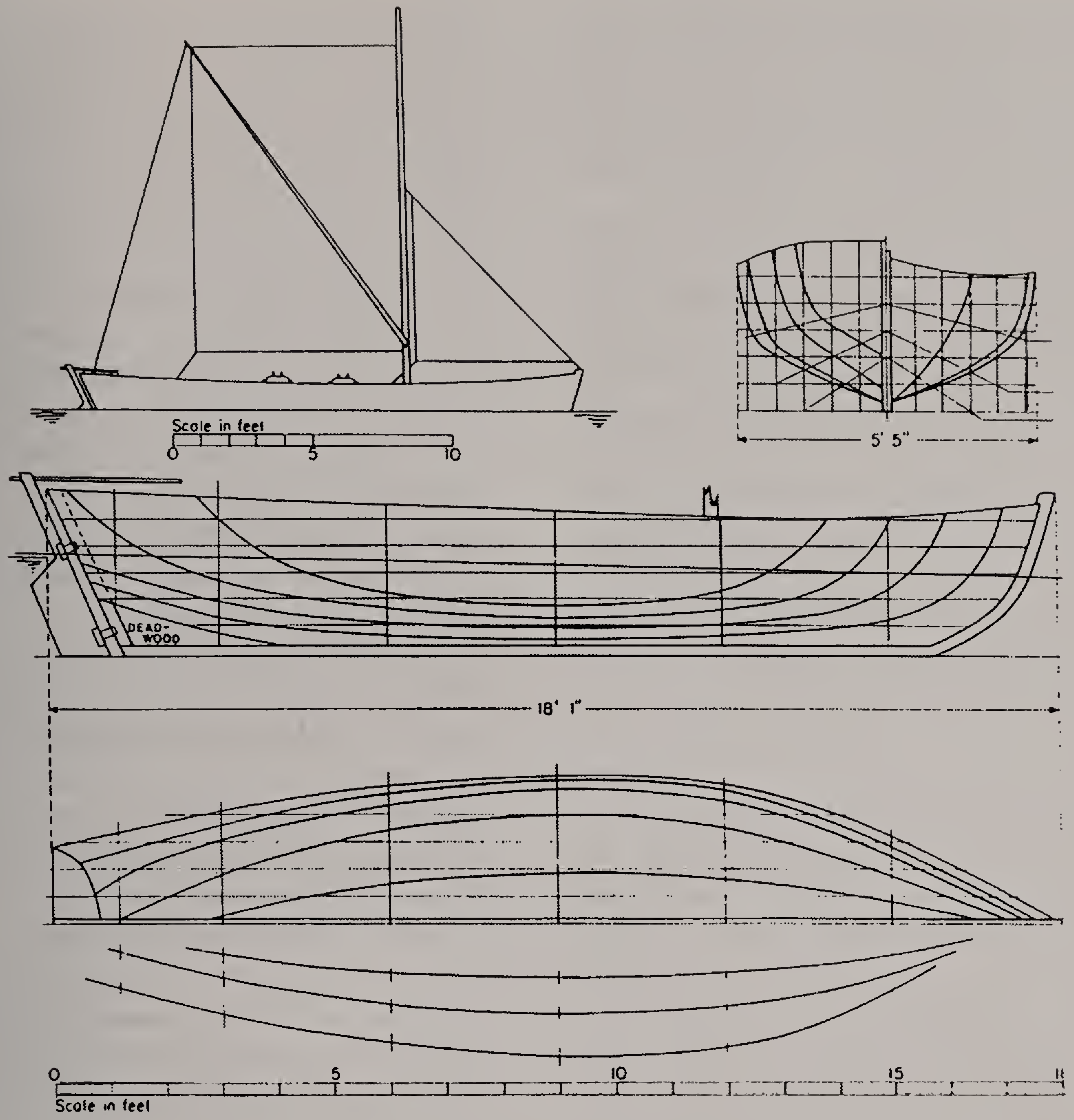

Fig. 6. St. Lucia planked boat *Merci-Dieu,* 1975 (after Pyle, page 162).

Windward Island Caribs were entire communities holding out in Guadeloupe, Dominica, Martinique, St. Lucia, St. Vincent, and Grenada.[17] These remnants were able to survive only because during the 1520s and 1530s Spanish intervention in Mexico and Peru suddenly provided profit centers on a much larger scale than ever anticipated through the mining of silver. The world of the Island Caribs was permitted to lapse into the status of a little-visited backwater in the emergent Spanish Empire.

Respite for the Island Caribs would last until seventeenth-century French and British colonies were pioneered in the Windward Islands to develop plantations of tobacco and sugar. Final political and physical destruction of the Island Caribs in Guadeloupe, Martinique, and Grenada occurred in the period between 1625 and 1655 as French intruders began plantations, wars of extermination, and the importation of African slaves. Carib communities in the remaining islands continued to exist independently for another century, involving occasional trading contact with or petty raiding of European settlements. At the end of the Seven Years War in 1763, France and the United Kingdom agreed that the Carib islands of

Dominica, St. Lucia, and St. Vincent would become British possessions, and Grenada's political status as well was changed from French to British. Serious planting and displacement of the Island Caribs in the former three islands and in Trinidad began after the American Revolution, in the 1780s.

Thus, the destruction of the Caribs was a much slower process than had been the case for the Ciboneys and Tainos, taking in the main over two hundred years. Pockets of Island Carib survivors gradually mixed into the dominantly African slave population that replaced them. In the most remote areas of Dominica and St. Vincent, some nearly pure Carib communities still exist. It seems possible, even inevitable, that long observation plus the gradual mixing of Carib and African bloodlines could have been accompanied by the intermingling of maritime traditions; certainly this was true of foodways, tools, and architecture.

Although there are no historical artifacts to prove it, since the Island Caribs had dugout canoes and may well have understood sailing technology, here we may find the ancestral roots underlying the observed use of distinctive sailing dugout canoes by fishermen throughout the Windward Islands even into the late twentieth century. In Guadeloupe, St. Vincent, and Trinidad, dugouts were extinct by the 1970s, but they were still numerous in Dominica, Martinique, and St. Lucia.[18] Antillean dugout canoes were starting to be replaced by planked boats not because of a recognized superior design but because large enough logs to build dugouts were becoming scarce.

Douglas Pyle was able to take lines drawings of these island dugouts in the 1970s, including the Grenadian "canoe" just before it became extinct (fig. 1). The Grenadian canoe was no longer a true dugout. A trough was cut in what had now become essentially a keel, after which planks were formed in clinker style to build up the sides. Frames, stringers, and thwarts were added afterward. The three strakes were lapped to form a stubby hull seventeen feet long by four feet wide, with no attempt to provide anything more than the shape of a widened log. It was sailed using a very low aspect ratio version of the sloop rig, usually with the crew also rowing.[19]

In Trinidad, Pyle measured a much better made, better-designed lapstrake boat called a pirogue (from the Carib *piragua*) that had the same vestigial canoe keel (fig. 2). It still exists; we have lately observed it being made and used by fishermen from the Grenadines to Margarita Island. It is distinctive in having a high, raked stem and considerable sheer from bows significantly taller than the stern. Formerly, it was rigged identically to the Grenadian canoe; today it is uniformly modified from double-ended sailboat into a boat with a wide transom stern devised to carry an outboard motor.[20]

Pyle found true dugout canoes surviving in Dominica, Martinique, and St. Lucia, called the *gommier* in the first two islands and the *canot* in St. Lucia; they had recently become extinct in Guadeloupe (fig. 3).[21] The name *gommier* is derived from the preferred tree used for dugout building in the islands *(Dacryodes excelsa),* rare today except in Dominica. All were sailed using a full, loose-footed sprit-rig set without a foresail, trimmed with sheet and a vang to the peak of the sprit, and steered with a paddle over the leeward stern sheets. The dugouts Pyle observed typically were twenty to twenty-five feet long with notable sheer running back from a high bow, and waterlines showing a hollow entry and surprisingly fine run aft. In St. Lucia, builders took pains to flatten "floors" and create a moderately hard chine at the turn of the bilge; the canoes also had been fitted with strakes to increase freeboard. The dugouts' widths averaged four and a half feet, producing a length to beam ratio of around 4.4:1. In each case, reinforced strakes were added above the dugout proper to create greater freeboard, as lapstrakes in Dominica and Martinique but in carvel fashion in St. Lucia. Interestingly, joining of the strakes at the stem of the St. Lucia design was set a foot or so aft of the log bow, giving the design a unique "ram" configuration (fig. 4). In Dominica and Martinique, the foot of the bow extended forward also, but as a less striking ram protrusion. It seems doubtful that it was done in order to maximize waterline length, but because of the sophisticated design in general, this cannot be ruled out as a possibility. In a curious nod to free enterprise specialization, Honychurch reports that "canoe shells"—in other words, roughly prepared but not finished—were an export item of the Dominican Caribs to the other islands by the end of the seventeenth century.[22] This was still going on in the early 1970s when Pyle was present to observe it.[23]

While the dugout remained the main small watercraft type in Dominica, where large logs were still available, in Martinique and St. Lucia it was now being joined by framed and planked boats made in the same design configuration. In Martinique, the *yole* was a boat bearing essentially the same dimensions and rig as the *gommier/canot* but formed of planks bent over keel, stem and stern posts, and ribs, and only used for racing, not for fishing. It also was designed to sail on occasion with two sprit-rigged sails (fig. 5). The hull design of the framed St. Lucian "boat" may represent an entirely idiosyncratic introduction rather than a canoe derivation, for it possessed a flared transom and held length-to-beam dimensions of 3.3:1, was sailed with sprit sail and a forestay sail, and was steered with tiller and rudder instead of a paddle (fig. 6).

The dugouts and their derivative *yoles* were both fast and weatherly. The fastest racing *yoles,* with large crews hiking out on planks, were estimated by Pyle to be capable ordinarily of speeds above seven knots but peaking at over fourteen.[24] The streamlined shape and slight hollowing in bow and stern makes such high speeds less surprising than their ability to beat nearly as well as modern yachts. This was accomplished by the steersman sculling continuously, keeping the canoe moving in a continuous pattern of sailing full to the point of nearly capsizing, then luffing up into the wind for an instant to recover. If the modern *gommier/canot* represents a lingering remnant of Island Carib marine physical culture, it gives a very good idea of how they were able to race from island to island so effectively, both for the purposes of war among themselves but also to take Taino captives for cannibalistic rituals and later to resist French and English incursions.

This brings us to the question of origins, about which nothing but interesting directions for further research can be offered at this point.

There appear to have been two types of dugout hull models: the canoe/*piragua* and the *gommier/canot.* The canoe/*piragua,* found in Grenada and Trinidad, by the late twentieth century was no longer a true dugout. Instead, a hollowed keel was now the foundation of a lapstrake hull and, in fact, was the sole material part of the design suggesting its origins. The length-to-beam ratio was around 4.5:1, and it was sailed with a low aspect sloop rig and steered with a paddle. The *gommier/canot,* surviving in Dominica, Martinique, and St. Lucia and recently deceased in Guadeloupe, was either a true dugout canoe or a *yole* in the same model. It was more streamlined than the canoe/*piragua,* with a length-to-beam ratio of 5.5:1, usually was sailed with a sprit sail set well up in the bows, and also was steered with a paddle.

The Ciboneys and Tainos reached the Antilles well before the Island Caribs, and it is unknown whether they paddled or sailed. The Caribs arrived in the Lesser Antilles starting around two thousand five hundred years ago. Were they already using built-up planking and sprit-sail rigs to man canoes with an extended forefoot and shaped for high speed? The idea of adding planks to a dugout in order to create greater freeboard is old and worldwide; this trait alone is not suggestive of anything in particular.[25]

The distinctive island sprit rig could be a recent European introduction. The sprit rig was widely used in European navies during the age of sail, so stimulus diffusion at a later date is a possibility, but an even more intriguing alternative is suggested by the time frame of the Island Caribs beginning their occupation of the Lesser Antilles.

Is it a coincidence that the sprit rig begins to be used in Mediterranean waters at about that time? There is no artifactual evidence for early sprit-rigged boats in either the Old or New Worlds, but Lionel Casson has shown that carved reliefs dating to the second or third centuries B.C. conclusively demonstrate this sailing technology's presence in the

Mediterranean by that date.[26] Today it is widespread in the New World; we recently have observed the sprit rig in Windward Island fishing boats and among Riverine Indian and mestizo societies in Latin America from Panama to Brazil. One wonders whether the island canoe design, featuring the extended forefoot ram—a unique form not known to us in any other dugout designs—is more than a distant echo of the extended forefoot known among Mediterranean planked vessels over two thousand years ago. A number of Roman coins have been found in the Americas, but not recorded with enough careful scientific scrutiny to affirm a pre-Columbian transatlantic contact; the same problem attends finds of amphorae in two unexplored Latin American "shipwreck" sites.[27] There has been one detailed study of where and when Phoenician contact with the New World tropics might have been made, but this was based primarily upon a review of the classical Greek and Latin literature.[28]

Boat and canoe builders in traditional societies are known to have maintained designs with little modification for hundreds, even thousands of years.[29] Could the Antillean canoes have been diffused from Phoenicians or Romans to the American Indians—or could the sprit rig actually have originated among the Caribs and gone back to the Mediterranean Sea in the minds of returning Old World sailors? Clearly, much remains to be done in resolving this and other aspects of the Island Caribs' story.

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THE *MARY SUMMERS:*

AN EARLY IRON STEAMER IN AMERICA

by Charles E. Pearson, Stephen R. James Jr., and J. Barto Arnold III

Resting in the shallow waters of the Navidad River in Jackson County, Texas, are the remains of a little-known but rather remarkable nineteenth-century steamboat, the *Mary Summers.* The wreck, consisting of the major portion of the iron hull of the vessel, lies on the eastern side of the Navidad, about two miles above its juncture with the Lavaca River. The wreck, her bow barely ten feet under the surface, has long been known by local residents, and reliable oral histories suggest that the vessel was sunk or abandoned during the early years of the Civil War. Although the existence of the wreck was known, only recently has its identity been determined. This identification arose out of archaeological research conducted in 1991 and subsequent examination of historical records and documents.[1]

The *Mary Summers* was a unique American vessel. The iron plates and frames for her hull were prefabricated in Birkenhead, England, in 1838. These were then shipped to the United States and assembled in Baltimore. After service on the Savannah River and the Georgia coast, the steamer was sold to the United States government and used in the Mexican War. Following the war, the *Mary Summers* remained in the Gulf of Mexico, carrying passengers and cargoes along the Louisiana and Texas coasts. In addition to being one of the first iron vessels to operate in the gulf, the *Mary Summers* was one of the earliest iron-hulled ships used in the United States. In fact, her wreck may represent the oldest iron steamer yet discovered in this country.

The 1991 examination of the then-unidentified "Navidad River Wreck" revealed that it consisted of an iron hull resting upright, with the bow toward the eastern bank of the Navidad and the stern an-

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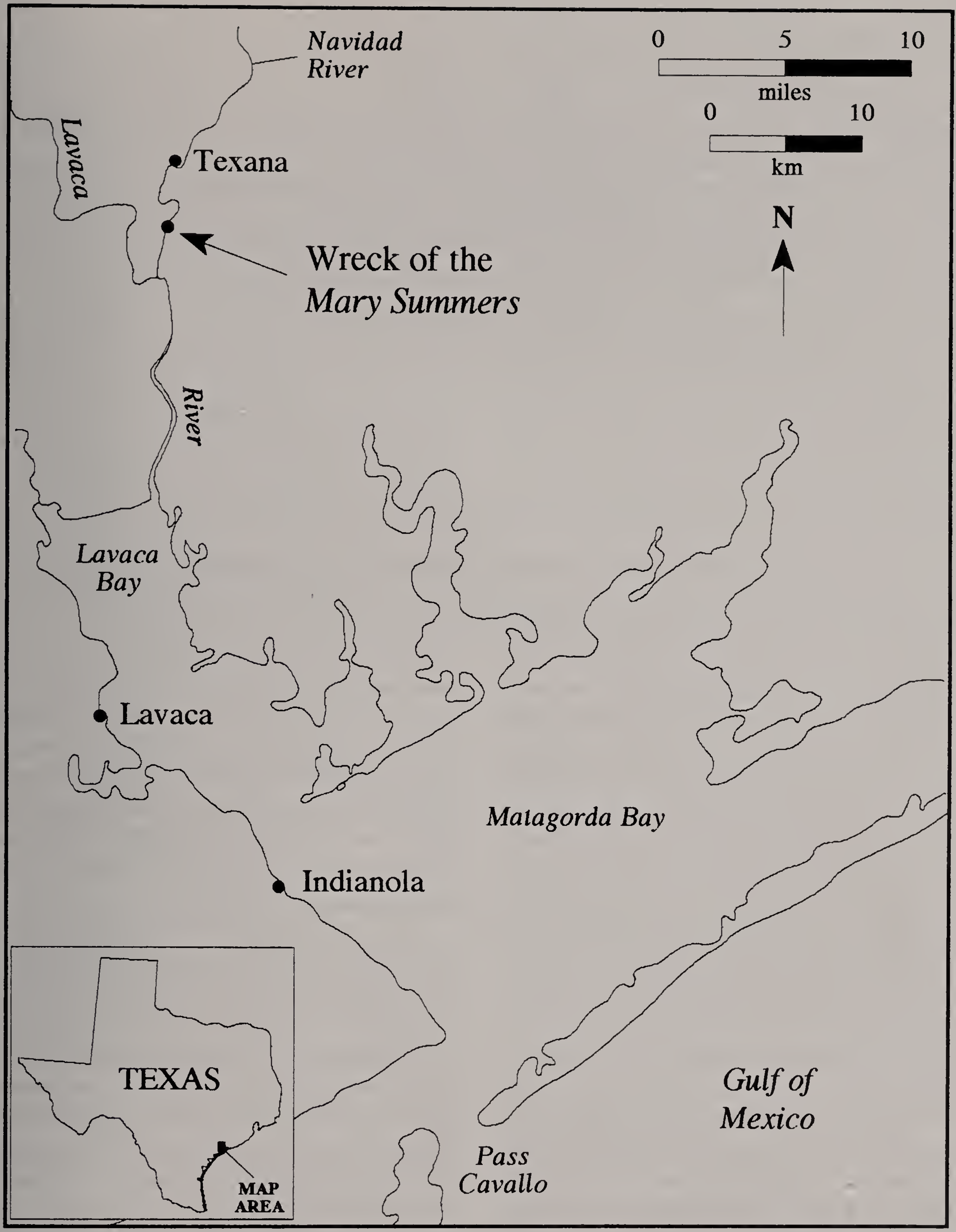
gled out into the river. The bow lay in about ten feet of water; the after section, however, was buried beneath a sandbar in three to five feet of water. The wooden main deck and all of the upper works of the vessel were missing. The hull, almost entirely intact, measured approximately 114 feet long with a midship beam of 27′8″ and an approximate depth of hull of 7′. The hull was constructed of quarter-inch-thick iron plates riveted together and attached to interior futtocks (ribs) and floors that were constructed of angle iron. Several partially exposed hull plates on the port side could be measured with reasonable accuracy, and these were six to seven feet long and two feet wide. Each iron plate overlapped its adjacent lower plate by two inches in a typical clinker-built fashion and was joined with a single row of rivets. Seventeen feet aft of the bow were the remains of a heavily damaged bulkhead constructed of quarter-inch-thick iron plating. This was the only bulkhead discovered and its purpose was to form a watertight compartment at the bow of the vessel. These forward bulkheads were commonly known as "collision" or "forepeak" bulkheads, and the forward compartment was called the "snag chamber" because it served to prevent flooding of the entire hull in the event that a snag was struck.[2]

One of the most notable features of the hull observed during the examination of the *Mary Summers* is a series of notches cut in the top of the gunwale at regular intervals. These notches are the openings in which deck beams rested. Along much of the vessel's length the deck beams would have projected several feet beyond the hull to form extensions of the main deck known as the "guards," features characteristic of river and coastal steamers. The notches vary in size, revealing that two sizes of deck beams were used, one measuring eight inches deep and seven inches wide and a larger beam measuring eight inches deep and eleven inches wide. Most of the wider notches are in the area interpreted as the paddlewheel location where larger beams were needed to provide additional strength to offset the weight and stresses produced by the paddlewheels and the paddlewheel shaft. Although the deck beams are gone, the remains of several wooden hanging knees that supported these beams are still present.

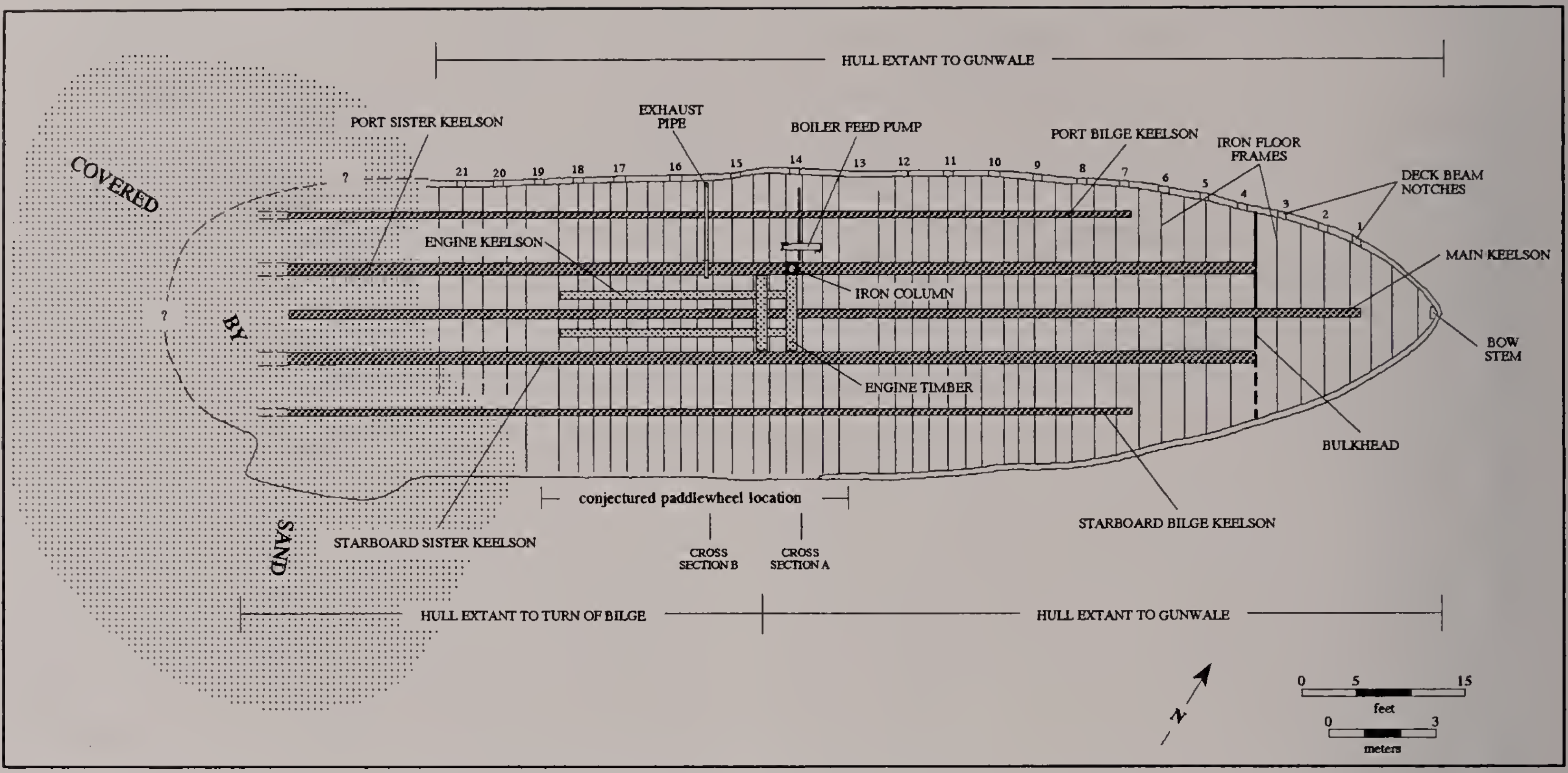
Inside of the hull are five long, wooden keelsons sitting atop and fastened to the iron floors. These five consist of two bilge keelsons, two sister keelsons, and a main or central keelson. The main keelson extends ninety-eight feet along the centerline of the hull, and the two slightly shorter sister keelsons are spaced three feet on either side. Positioned four feet outside of the two sister keelsons are the bilge keelsons. These latter timbers begin twelve feet aft of the forward bulkhead and extend past the aft end of the main keelson, disappearing into the sandbar. The two sister keelsons exhibit the largest dimensions of any timbers discovered on the vessel, measuring twenty inches by fourteen inches in section. Near the center of the vessel is a grid of heavy timbers. These timbers, consisting of two engine keelsons and two engine support timbers, formed the supporting framework for the vessel's engine and paddlewheel mechanism. All of the keelsons and the engine support timbers are made from white pine (*Pinus strobus*), a wood commonly used in boat construction in the nineteenth century.

Cross sections of the hull in the engine area show the arrangement of the keelsons, the various elements of the engine support structure, and the flat bottom of the boat's hull. Features found at the forward end of the framework of engine timbers include an intake pipe attached at the turn of the bilge on the hull and a cast-iron column attached to the top of the port sister keelson. The column, cast in the Doric style, is in remarkably good condition and measures 5′3″ high. Although now missing, a matching column originally had been located at the same position on the starboard sister keelson, and it is believed that another pair of columns once stood a few feet farther aft. These columns would have served as supports for the vessel's engine cylinder and paddlewheel shaft. The incorporation of classical column forms as functional elements of a boat's machinery was a fairly common practice in the nineteenth century.

The engine of the vessel is missing, presumably removed when, or soon after, the boat sank or was



The area of Matagorda Bay, Texas, showing the location of the wreck of the *Mary Summers* and the area in which she worked in the 1850s. This is derived from figure 1 in Charles E. Pearson et al., "Underwater Archaeology along the Lower Navidad and Lavaca Rivers, Jackson County, Texas" published in 1993.



Plan view of the wreck of the *Mary Summers* showing internal features such as the wooden keelsons and engine support timbers. This is derived from figure 34 of Charles E. Pearson et al., "Underwater Archeology along the Navidad and Lavaca Rivers, Jackson County, Texas" published in 1993.

scuttled. The evidence gathered during the archaeological examination suggested that the boat was fitted with a single-cylinder, low-pressure engine, either a type known as a "crosshead" or "steeple" engine or one known as a "walking beam" engine.

All of the archaeological evidence collected from the remains of the "Navidad River Wreck" implies that the vessel was a nineteenth-century sidewheel steamer. The use of wooden keelsons in conjunction with iron frames and hull and the riveted construction were seen as indicators of a mid-nineteenth-century date of construction. The use of iron columns as elements of the engine or paddlewheel mechanism also reflected 1838 construction techniques. Finally, the placement and construction of the engine support structure seemed most similar to that used with single-cylinder, low-pressure engines on sidewheelers. The 1991 research on the "Navidad River Wreck" had revealed that the best candidate for the wreck was the *Mary Summers,* one of the small number of iron steamers known to have been working along the Texas coast in the 1850s. The intriguing question was how and why did this little steamboat end up on the Navidad River in Texas thousands of miles from where she had been fabricated in England? Subsequent to the 1991 archaeological study, an intensive search for documents and records gathered information that has proven beyond a doubt that the wreck on the Navidad River is the *Mary Summers,* and as a result a fairly complete story of her life and place in history has emerged.

The *Mary Summers* arrived in Savannah, Georgia, in the spring of 1839, joining other merchant steamers owned by the recently formed Iron Steam Boat Company of Georgia. Steamboating was a thriving venture in Georgia by this time; the first commercially successful steamboat to operate in the state was the *Enterprise,* built at Augusta in 1816 by Samuel Howard. A year later, Howard organized the Steam Boat Company of Georgia, which was chartered by the state and given exclusive rights to operate steam-propelled vessels on state waters.[3] By 1823, Howard and his company were operating several small steamers on the Savannah and the Altamaha Rivers, using them primarily as towboats to pull barges and flats of cotton downstream. In 1824, the

Steam Boat Company lost its state monopoly, but it was not until 1835 that another steamboat company was organized in Georgia; this was the Iron Steam Boat Company. The president of the Iron Steam Boat Company was a banker and cotton merchant with the euphonious name of Gazaway Bugg Lamar.[4]

Gazaway Lamar, a member of a distinguished Georgia family, was a prominent figure in business circles in Augusta and Savannah in the late 1830s. Born near Augusta in 1798, he received little formal education, but this did not hinder his success in the fields of business and finance. He started as a commission merchant, first in Augusta and then in Savannah, but soon expanded his interests to banking and steamboating and, later, insurance. In 1825, Lamar was named director of the Planter's Bank of Georgia, became a principal stockholder in the Mechanic's Bank of Augusta, and for a while owned a toll bridge across the Savannah River at Augusta. Gazaway Lamar is reported to have provided financial aid to the young Republic of Texas. Lamar's cousin Mirabeau Buonaparte Lamar was, in fact, the second president of Texas.

In June 1838, the same year he purchased the *Mary Summers,* another of Lamar's steamboats, the *Pulaski,* exploded off the North Carolina coast. More than one hundred passengers were killed, including Lamar's wife, Jane Creswell Lamar, his five daughters, and his youngest son. Gazaway Lamar and his remaining child, Charles Augustus Lafayette, survived. Within a year, Lamar remarried and in 1845 he moved to Brooklyn, New York, where he became a commission merchant and shipper. In 1851 he established the Bank of the Republic in New York City and later became involved in several insurance companies. These included the Great Western Insurance Company, of which he was a director, and the Lamar Insurance Company that he established in 1856. Gazaway Lamar returned to Savannah when the Civil War broke out, becoming advisor to the Confederate government on fiscal matters. At the end of the war, the Federal government confiscated Lamar's stored cotton, and he was arrested and tried on a charge of theft of government property. He was sentenced to prison, but President Andrew Johnson commuted the sentence. After the war, Lamar pursued several lawsuits against the government in an effort to recoup the over one million dollars of cotton he claimed was taken from him. Ultimately, he won, and in 1873, he was awarded almost six hundred thousand dollars, the largest individual award arising from Civil War claims. Gazaway Lamar died in New York City in 1874.

An astute and farsighted businessman, G. B. Lamar recognized early on the importance of steam navigation and, additionally, the value of iron-hulled ships. In 1834, he purchased the iron-hulled sidewheel steamer *John Randolph* from the famous British shipbuilder John Laird of Birkenhead, England. Lamar placed the *John Randolph* in operation on the Savannah River, steaming between Savannah and Augusta, the cities where most of his business interests lay. This put the iron steamer in direct competition with the boats of the Steam Boat Company. The *John Randolph* was a prefabricated vessel; the rolled iron for her hull was shipped across the Atlantic in pieces and assembled at John Cant's shipyard in Savannah. Measuring 110 feet long, the *John Randolph* was powered by a single-cylinder, low-pressure condensing engine of forty horsepower built by Fawcett, Preston and Company of Liverpool. Although many were initially skeptical about the use of iron hulls, some even thinking they would be too heavy to float, the *John Randolph* was a great success; in fact, it was the first commercially successful iron-hulled steamboat to operate in the United States.[5]

In the 1830s, John Laird built six more iron boats for export to the United States, four of which were sent to join the *John Randolph* in Savannah. Gazaway Lamar's rival, the Steam Boat Company of Georgia, bought the *Chatham* in 1836. Lamar himself acquired the *Lamar, De Rosset,* and *Mary Summers* in 1838.[6] All these vessels were prefabricated and assembled in the United States, the *Chatham* and *Lamar* in Savannah, and the *De Rosset* and *Mary Summers* in Baltimore. No records of what Lamar may have paid for the *Mary Summers* have been found. In 1846, however, he claimed to have paid $36,000 or $37,000 for the *De Rosset,* probably about the same amount he paid for the *Mary Summers.*[7]

The unassembled pieces of the *Mary Summers* and the *De Rosset* arrived by sailing ship in Savannah, reportedly in the winter of 1838. Because of the lack of facilities and expertise in Savannah to build the required steam engines, Lamar had the material reshipped to Baltimore where the vessels were assembled—the *Mary Summers* by the firm of Brown, Culley and Rogers and the *De Rosset* by Langley B. Culley & Sons.[8] The Baltimore firm of Watchman and Bratt built the machinery for both boats, while the boilers were constructed by the James P. Allaire firm of New York. Watchman and Bratt, one of the oldest and most prominent manufacturers of steamboat engines in the United States, had been established by John Watchman in Baltimore in 1816. In addition to steamboat engines, the firm was involved in the construction of ships, dredges, railway cars, bridges, and lighthouses for nearly sixty years, until going out of business in 1873.

Both vessels were completed in the spring of 1839. The earliest extant official record for the *Mary Summers* is her temporary registration document issued at the port of Baltimore on 18 May 1839. The *Mary Summers* was "duly registered" by James J. Fisher, a resident of Baltimore, acting as agent for G. B. Lamar of Savannah, the "only owner of the Ship or Vessel called the *Mary Summers* of Savannah."[9] James Fisher was a Baltimore merchant who apparently had some business relationships with Lamar. The *Mary Summers* and the *De Rosset* seem to have been the sole property of Gazaway B. Lamar; his enterprise, the Iron Steam Boat Company, does not appear to have been involved in their ownership. Lamar's business interests and dealings were intricate and complex, and he may have purchased the vessels under the authority of a petition made to Congress in 1838 by his rival, the Steam Boat Company of Georgia, to import two iron steamboats duty free.[10] Whether or not he bought the ships in collusion with the Steam Boat Company is unknown; within three years, however, this company would own the *Mary Summers.*

The 1839 registration document provides some information on the *Mary Summers*'s appearance. She is described as having one deck, no masts, a round stern, no galleries and a plain head (i.e., no figurehead).[11] The boat was 114′6″ long; had a breadth of 25′4″; a depth of 7′8″ (35 x 7.7 x 2.3 meters); and a burden of 203 and 6/95 tons. Eugene Wambersie is listed as master of the *Mary Summers.* Accompanying the registration is a Master Carpenters Certificate, also dated 18 May 1839. This certificate, signed by the builders William S. Rogers, John S. Brown, and Robert Culley, provides slightly different measurements for the *Mary Summers*:

> This is to certify that we have constructed the carpenter or wood work of the Steam Boat *Mary Somers* in Baltimore during the present year 1839 for Mr. Jas. J. Fisher of Baltimore Md as agent for G. B. Lamar of Savannah, Ga, and that said Steam Boat has one deck no masts is One Hundred fifteen feet in length on deck, Twenty five feet in Breadth and seven feet three inches in depth and is One hundred Ninety Tons and seventy five Ninety-fifths of a Ton Carpenters admeasurement.[12]

The dimensions for the *Mary Summers* given in her first registration and the carpenters certificate match almost exactly the dimensions of the wreck in the Navidad River. No other early descriptions of the *Mary Summers* have been found, but her consort, the *De Rosset,* stopped in Wilmington, North Carolina, to provide excursions for the residents on her way from Baltimore to Savannah in the spring of 1839. The local newspaper, the *Wilmington Chronicle,* described *De Rosset* on 23 April:

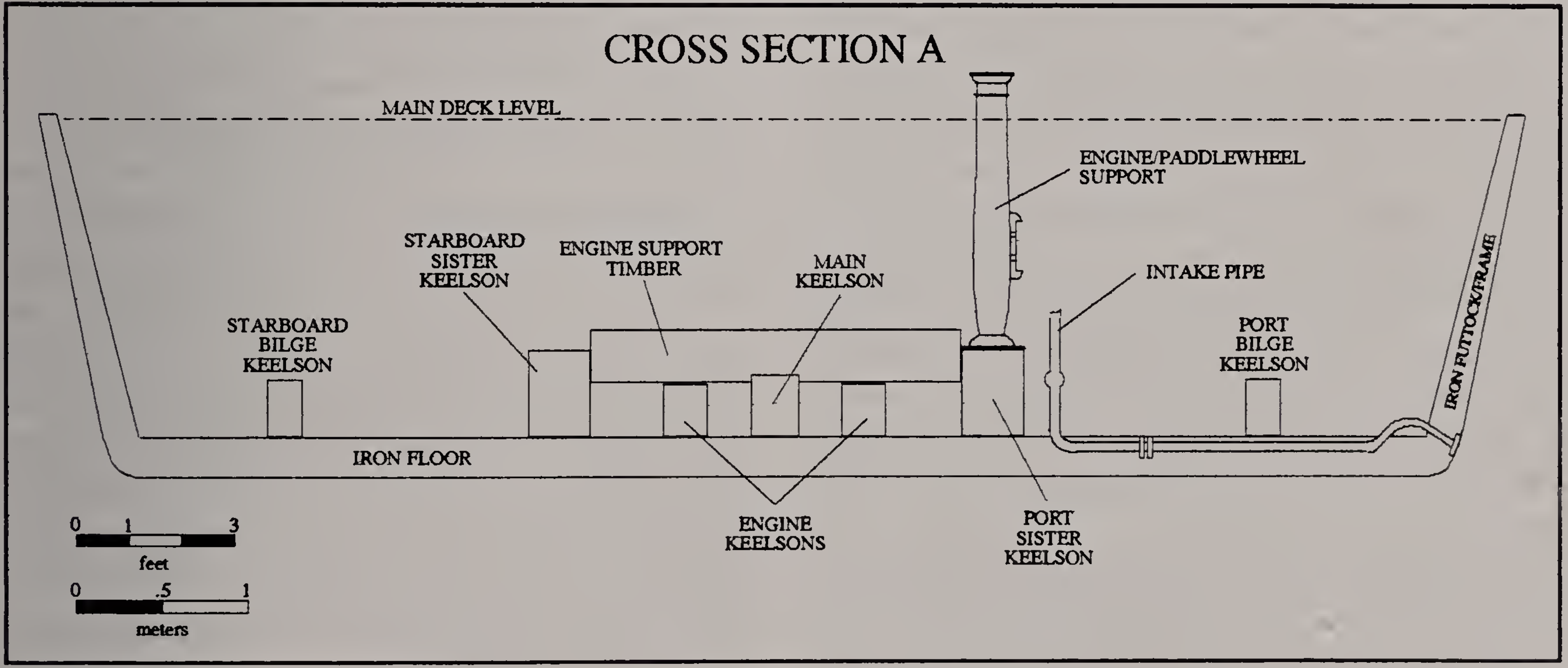
> The sheets of iron of which her hull is composed, are about 24 by 18 inches, and about 3/8 in. thick. They overlay each other from 2 to 2 1/2 inches, and are thickly riveted together, with strong, wrought iron ribs, running transversely, eighteen inches apart from stem to stern.[13]

This description of the *De Rosset*'s hull closely matches what was found on the wreck of the *Mary Summers,* and the boats may have been of similar build. The iron plates used on the *De Rosset* are smaller than those measured on the wreck of the *Mary Summers.* However, only the upper row of hull plates (the sheer strake plates) on the *Mary Summers* could be measured, and on iron vessels these upper plates were commonly larger than those used elsewhere on the hull.

The *Mary Summers* left Baltimore for Savannah soon after launching, arriving in the city on 30 May 1839. The *Savannah Daily Georgian* of 31 May reported the arrival and noted that the steamer would be placed in service between Savannah and Macon, a town located far up the Altamaha and Ocmulgee Rivers near the center of the state. The Savannah newspapers make no further mention of the *Mary Summers* until the fall of 1839, and her activities during this summer are unknown.

On 29 October 1839, the Savannah papers reported that the "new Iron Steamboat *Mary Summers*" would be departing for Charleston. On this same day, a new enrollment was issued for the *Mary Summers* in Savannah. This document reveals that the ship was enrolled by C. F. Mills of Savannah, acting as agent for the sole owner, Gazaway B. Lamar.[14] John Pearson is listed as master. Notices and advertisements in Savannah newspapers reveal that over the next month the *Mary Summers* was steaming to several towns along the coast in addition to Charleston, including Brunswick and St. Marys in Georgia and Jacksonville in Florida. On 29 November, an advertisement appeared in the Savannah newspapers announcing that the *Mary Summers* and the *De Rosset* would be sailing to the inland towns of "Hawkinsville, Macon and the Landings on the Ocmulgee River . . . during the coming season."[15] The advertisement stressed the fact that the insurance rates for cargoes carried on the two iron boats were only one-third to one-half of those charged for wooden steamers.

The *Mary Summers* ran along the coast and to Macon for a short period of time, but by 1841 Lamar had moved his boat to the Savannah River, carrying freight and passengers between Augusta and



A cross section of the *Mary Summers*'s hull in the engine area showing the various wooden keelsons and engine supports and the cast-iron column believed to have served as a support for the engine cylinder and paddlewheel shaft. This is derived from figure 37 of Charles E. Pearson et al., "Underwater Archeology along the Navidad and Lavaca Rivers, Jackson County, Texas" published in 1993.

Savannah. Local newspapers of the period show that about a dozen steamers operated regularly on the Savannah River. The downstream cargo of the *Mary Summers* and the other Savannah River boats was almost exclusively cotton, most of it loaded in Augusta. By this time, Savannah was one of the leading cotton ports in the nation. The city's cotton exports had grown from about 49 million pounds in 1825 to over 102 million pounds in 1840, a large percentage of it brought to the city from the interior in barges towed by Savannah River steamers. The cotton and other Georgia produce such as rice and timber resources, were carried out of Savannah to American markets in the northeast, particularly New York, and overseas aboard sailing ships and steam packets.[16]

In July 1842, Gazaway Lamar sold the *Mary Summers* to his major rival, the Steam Boat Company of Georgia. R. M. Goodwin, president of the Steam Boat Company, enrolled the steamer in Savannah on 12 July with C. R. Powell as master.[17] The *Mary Summers* remained on the Savannah River for the next four years, normally under the command of Captain Powell and Captain Henry Hubbard, both of whom also commanded other Steam Boat Company vessels. Savannah newspapers of the period provide information on voyages of the Savannah River steamers, primarily in terms of the cargoes they were carrying into the city. This information appeared in the "Marine News" section of several papers, which normally listed the arrival and departure dates of commercial vessels, the name of the captain, the cargo carried into the city, the consignees for the cargo, and the names of passengers. A typical entry would be the one appearing in the 23 March 1841 issue of the *Savannah Daily Georgian* under "Arrivals":

> Arrived: Steamboat, *Mary Summers,* Powell [master], [from] Augusta, with towboats 7 and 12, to Georgia Steamboat Company, [carrying] 644 bales cotton & sundries.

The newspapers sometimes provided a listing of the consignees receiving the ship's cargo, such as in the *Savannah Daily Georgian* on 19 April 1841:

> Arrived: Steamboat, *Mary Summers,* Powell [master], [from] Augusta, with towboats 3 and 6, to Georgia Steamboat Company, [carrying] 800 bales cotton & mdze to E. Reed, F. W. Fleming, Holmes & Sinclair; H. Harper; D. S. Adams; Adams & Burroughs; Lewis & Wilder; S. D. Corbitt; A. R. Gordon; R. M. Goodwin; J. Boston.

The majority of these consignees were factors or commission merchants who handled the sale of the cotton for individual planters. Most of the cotton transported by the *Mary Summers* and the other Savannah River boats was carried in wooden barges or towboats, tied behind or alongside the steamer. Based on the newspaper entries, some of these towboats could carry as much as seven or eight hundred bales of cotton, although they generally carried less. The cotton borne down the Savannah River was almost exclusively characterized as "upland cotton" to distinguish it from the more valuable sea island cotton that was grown along the coast. Upland cotton brought about 7 cents per pound on the Savannah market in 1841, such that the *Mary Summers*'s 19 April shipment of eight hundred bales, at four hundred pounds per bale, would have been worth about $22,400.00. The value of the unspecified "mdze" ("merchandise") cannot be determined. In 1841, the Savannah newspapers list twenty-two arrivals for the *Mary Summers,* carrying at least 9,664 bales of cotton. This represents almost four million pounds of the fiber, worth an estimated $270,000. In subsequent years, the steamer carried similar amounts of cotton into Savannah. These examples demonstrate the great value of the cargoes, primarily cotton, carried down the Savannah River by the *Mary Summers,* and she was only one of several steamers operating at the time. These boats, and the cotton they carried, were critical in making Savannah one of the nation's most active and prosperous ports in the 1840s.

Savannah newspapers reveal that most of the Augusta cotton crop arrived in the city between January and May, although shipments were received every month of the year. The cotton harvest normally began in September and could extend into January. The time-consuming process of cleaning, ginning, and baling the crop meant that most of it was not ready to ship until January. Shipments of cotton by the *Mary Summers* generally match this standard pattern, except for an unexplained large quantity she transported in October and November of 1844.

The *Mary Summers* occasionally carried passengers on her trips along the Savannah River. For example, on 21 January 1841, she arrived in Savannah with 345 bales of cotton and eight passengers: "Mrs Gardner & son, Mr Foster, lady and servant, Mr. Price, lady and child."[18] Little is known about the accommodations provided passengers on the Savannah River steamers. An English traveler, Frank Silk Buckingham, journeyed on the Savannah River in 1839 and left an account, including a description of the small steamer he traveled on, the *Thorne*. Although a wooden-hulled boat, the *Thorne* was probably not too different from the *Mary Summers*. Buckingham noted that the accommodations on the *Thorne* "were excellent":

> The ladies have a range of cabins below the main deck with windows sufficiently above the water to be kept constantly open; the gentlemen's cabin being above the deck, double-berthed, with a window in each bed-place. Everything was remarkably clean, the captain obliging and attentive, and the steward's department and table well conducted.[19]

Over the next several years, the *Mary Summers* settled into the day-to-day routine of service on the Savannah River. She continued to appear in the "Marine News" section of Savannah newspapers and occasionally in advertisements run by the Steam Boat Company. For example, on 30 July 1844, the following advertisement appeared in the *Savannah Daily Georgian:*

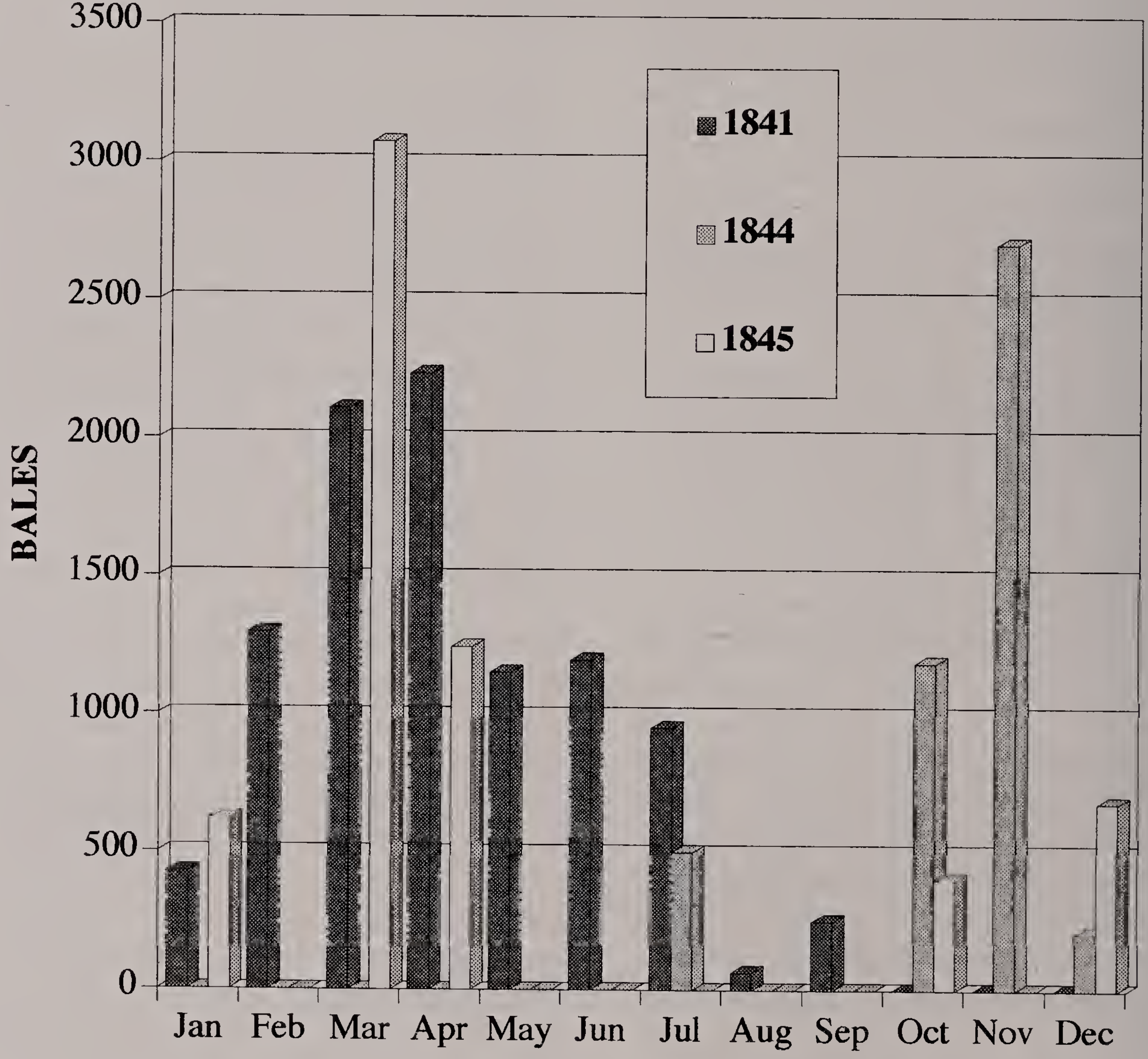
> FOR AUGUSTA
>
> The steamboat MARY SUMMERS, Capt. Hubbard, will leave for Augusta with Tow Boats to morrow evening.
>
> R. M. Goodwin, President
> Steamboat Co of Geo.

The newly declared Mexican-American War was soon to affect the *Mary Summers*. On 12 July 1846, the *Mary Summers* arrived in Savannah from Augusta with two towboats loaded with cotton; it was to be her final voyage in the Savannah cotton trade. Two weeks later, on 27 July 1846, the Steam Boat Company sold the *Mary Summers* to the United States Quartermaster Department.[20] The *Mary Summers* was one of a large number of small steamers and sailing vessels leased or purchased by the government in 1846 and 1847 to serve in the Gulf of Mexico as transport and supply vessels in the war with Mexico.[21] The United States had declared war against Mexico the previous May. General Zachary Taylor had been victorious in his first engagements and was planning to move the American army into northern Mexico. The war was followed closely in the American press. There was generally strong support for it around the country. R. H. Goodwin, as president of the Steam Boat Company, had approached the government offering to sell two iron boats, the *Mary Summers* and the *De Rosset*. The latter boat was nominally owned by G. B. Lamar, but at the time he was involved in business relations with the Steam Boat Company. Lamar had moved to New York the previous year. It is possible he had turned over operation of the *De Rosset* to the Steam Boat Company, although documentation supporting this has not been found. In May 1846, Goodwin wrote Thomas Butler King, Congressman from Georgia, stating that he had earlier written the secretary of war about the availability of these boats and their advantages but had received no reply. Goodwin wrote this message to King:

> These steamers are admirably adapted for transporting troops from one point to another in shoal water. They draw but 3 feet and 3 1/2 feet, have roomy decks and I think for short distances may take from 4 to 500 men each . . . [and] we have used them to tow up freight boats carrying each about 100 tons freight and they descend our Rivers with tow boats each boat carrying 600 bales cotton averaging 400 per bale.[22]

He also noted that the iron hulls would be particularly effective in the warm waters of the Gulf of Mexico because they were immune from damage by teredo worms.

Congressman King, who was influential in naval affairs, seems to have stimulated action on Goodwin's offer, because in June the *Mary Summers* was inspected by the quartermaster department. Levi Griffin of the department and W. T. and John H. Willnick, owners of one of the largest shipyards in Savannah, undertook the inspection. The documents resulting from this inspection provide information on the machinery used on the *Mary Summers* and the overall condition of the boat.



Cotton transported by the *Mary Summers* on the Savannah River for various years. This data is derived from the "Marine News" section of the *Savannah Daily Georgian.*

The Willnicks were responsible for examining the hull and cabin of the *Mary Summers*. Their report reveals that a great deal of repair was needed, possibly one reason the Steam Boat Company was anxious to sell the boat to the government. They noted that all of the decks and deck beams were decayed and had to be replaced and that the boat needed a new rudder ceiling and "water wheels" (paddlewheels). The Willnicks agreed to undertake the necessary repairs for $1,500. Levi Griffin inspected the iron elements and the ship's machinery and provided the following description:

> The hull which is of English iron, 3/8 in thick is found to be in good order with the exception of some nine holes in her bow and stem caused by accident in coming in contact with cotton flats, the towing of which she has been engaged in on the Savannah river for the last six years. All of these holes being above water can be easily repaired. This examination includes the inside of the hull and all above water on outside.
>
> The engine, (a low pressure, condensing) is 36 in diameter of cylinder and 6 feet-stroke, equal to sixty horse, geared with coupling shafts and couplings. The water wheel shafts, pinion shafts, air pump beam and cross head are of wrought iron, being an engine of Watchman & Bratt's best build of 1839 having been steadily engaged for a length of time the following repairs will be found necessary, viz,
>
> Top to reservoir, new air pump pedestal, new feed cocks, oil cup for force pump, repairing & fencing [?] neck shaft-standard, new stand, new keys for eccentric, new feather for shafts, refastening gallows posts, one new exhaust valve stem, bolts for securing deck plate, repairing brasses, lining engine & adding cut-off valve & chamber now deficient in that respect. The gallows frame is of cast iron connected at the feet on the deck plate which also receives the bottom of cylinder and main pillar blocks, metallic rings for cylinder, repairing water wheels, etc.
>
> The boiler was built in 1839 and has been used entirely in fresh water. It is fitted with four kidney return flues with water bottom. Upon examination I find the boiler to be in much better order than anticipated. With the following repairs I feel confident of 18 months or more service being derived from it, viz,
>
> The top of water bottom in arc ways requires parts of six sheets where blisters have been and not temporarily patches. Furnace doors lined and repaired. Outside corner of boiler repaired where it rests upon the stand, one course more on steam drum, new intake stack & new jacket, new gauge cocks and steam gauge, bolts to clasp boiler & confine it to keelsons for working in sea way.
>
> The probable cost of these repairs, new smoke stack to will not exceed $500, the repairs on engine & water wheels, $385, total $885.[23]

Levi Griffin does not identify the type of engine installed on the *Mary Summers,* but he does note that it was a low-pressure, single-cylinder engine. His reference to an "iron gallows frame" and a "crosshead" would seem to indicate that the boat was fitted with what was commonly known as a crosshead engine. In a crosshead or "steeple" engine, a short beam of iron, known as the crosshead, was attached to the end of the piston rod that projected upwards from the top of the vertical engine cylinder. The ends of the crosshead fit into a set of guides supported inside of the gallows frame (or "steeple") that rose above the engine. The crosshead was attached by various connecting rods to the paddlewheel shaft. As the piston rose up and down, the crosshead slid up and down in the guides, driving the connecting rods that rotated the paddlewheel shafts. Another type of low-pressure, single-cylinder engine in use at the time was the walking beam engine. In fact, when the *Mary Summers* was constructed, the walking beam had begun to replace the crosshead engine, which had been more commonly used in earlier years. In a walking beam engine, the beam or lever that drove the paddlewheels was mounted on top of the gallows frame (also called the A-frame) above the engine. One end of the beam was connected to the crank on the paddlewheel shaft; the other was linked to the engine piston. The top of the frame and the walking beam itself normally projected above the upper decks of the vessel. The fact that Levi Griffin makes no mention of a "walking beam" or "beam" in his fairly detailed discussion of the *Mary Summers*'s engine supports the notion that it was the crosshead type.

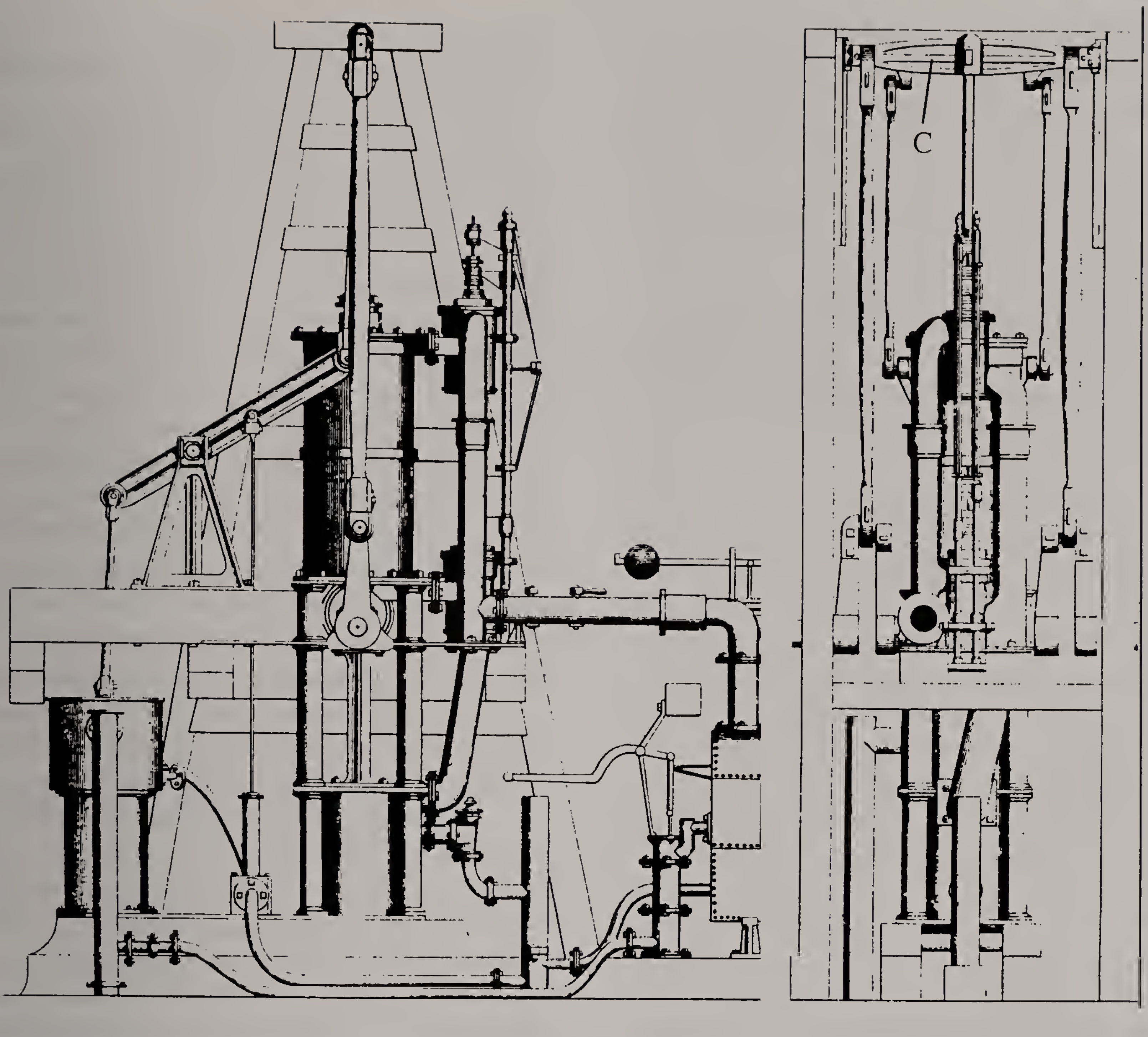
Crosshead engines were commonly used on river and coasting steamers but not so often on oceangoing vessels, in part because the extension of the heavy gallows frame and crosshead mechanism was so high above the main deck. Watchman and Bratt, the builders of the *Mary Summers*'s engine, did build crosshead engines in the 1830s. For example, they built the 44-inch-diameter crosshead engine for the sidewheeler *South Carolina* in 1835. However, they built other kinds of engines for steamboats as well. In 1842, John Watchman built a "lever-beam" engine for the *Medora* and, when the *Medora* exploded on her trial run, he fashioned a walking beam engine for the rebuilt vessel, now named *Herald*.[24]

On 1 July 1846, Captain Henry L. Wayne wrote from Savannah to Major General Thomas S. Jesup, quartermaster general of the army, that the inspections were completed and that the *Mary Summers* was fit for purchase but would require the repairs indicated by the inspectors. General Jesup apparently agreed, because the *Mary Summers* was bought, although the price paid is unknown. It was probably on the order of $25,000, the amount the quartermaster department offered to Gazaway Lamar for the *De Rosset*.[25] The Willnicks and Levi Griffin estimated that it would take three weeks to a month to make the necessary repairs. Their estimates were optimistic; it was not until 22 September that the *Mary Summers*'s furnace was fired for the first time, and she was taken on her trial run. Even then, it was noted that the "joinery and painting" were not completed. Wet weather and illness among the work crew had contributed to the delay, as did a shortage of some materials. For example, Captain Wayne reported that the deck planks needed for the *Mary Summers* could not be obtained in either Savannah or Charleston and had to be shipped from New York aboard the steamer *Palmetto*.[26]

In just over two months after her sale to the United States Army, the *Mary Summers* had been refitted and was ready to go to sea. In October 1846, the *Mary Summers,* apparently accompanied by the *De Rosset*, departed Savannah for the Gulf of Mexico, probably making harbor at or in the vicinity of Corpus Christi Bay or Brazos Santiago at the mouth of the Rio Grande, where American forces were concentrated. The two steamers were carrying new wagons for the army that had been loaded in Savannah; other supplies and troops may have been carried as well.[27] The next we hear of the *Mary Summers* is in February 1847 when she was at Tampico, Mexico. On the sixth of that month, her commander, Captain Fenn Peck, wrote to General Jesup concerning the ship's boiler, which needed replacing, as the survey in Savannah had predicted. Captain Peck, who had served on steamboats operating along the Georgia coast before the war, enclosed a drawing of the boiler and suggested that the James P. Allaire firm of New York make the repairs.[28]

When Captain Peck wrote, the *Mary Summers* was one of the many ships being used to transport General Winfield Scott's nine thousand American troops and their supplies from Texas to Lobos Island, located just south of Tampico. Lobos Island was the staging ground for General Scott's attack on Vera Cruz and eventual march to Mexico City. No documents have been found that shed light on the activities of the *Mary Summers* during the rest of the war. She would probably have been involved in carrying troops and supplies from Lobos Island to Vera Cruz in early March 1847 for the attack at Vera Cruz and, perhaps, remained on the coast providing supplies to the American army.

The Mexican War ended with the Treaty of Guadalupe Hidalgo in February 1848, and the last American troops departed that summer. With the war over, the *Mary Summers* was probably used to return troops and material to the United States, possibly to New Orleans. By September, the quarter-



A crosshead engine of the 1830s depicted in volume two of the the 1838 work entitled *The Steam Engine* by Thomas Tredgold. The letter "C" designates the crosshead, from which the engine derives its name. Note the use of iron columns as supports for the engine cylinder and paddlewheel shaft. Courtesy of the Seamaster Company, from the Kress Collection, Baker Library, Harvard Business School.

master department was selling many of the small vessels it had purchased for the war effort, including the *Mary Summers.* On 30 September 1848, the *Mary Summers* was enrolled in New Orleans, having been sold by the government to Henry Robinson, a resident of the city.[29] That same day, Robinson transferred ownership of the steamer to a William White, also of New Orleans. Enrollment documents for New Orleans record the sale of several small steamers and sailing vessels by the quartermaster department in late 1848 and into 1849. Among these was the iron-hulled steamer *Liberty,* formerly known as the *De Rosset,* the vessel that had long been associated with the *Mary Summers.*

The next mention of the *Mary Summers* is on 15 October 1848, when a Major O. Cross wrote to General Jesup informing him that the *Mary Summers* had been seized and was once "again Government property."[30] Apparently, Henry Robinson had not paid the full amount for the steamer. The documents imply that the *Mary Summers* was then at New Orleans, where the aborted sale had taken place. However, a notation on the back of Major Cross's letter states that "The *Mary Somers* will be retained for a tow boat on Lavaca Bay [Texas]." The quartermaster department was using the *Mary Summers* in and around Lavaca and Matagorda Bays on the central Texas coast, where the steamer was attached to the quartermaster and subsistence department's depot at Indianola on the western side of Matagorda Bay. The Indianola depot, established after the Mexican War, supplied frontier military outposts with material brought in by ship from various Atlantic and Gulf of Mexico ports.[31] A local newspaper, the *Texian Advocate,* published in nearby Victoria, Texas, reported that in February 1850 the "*Mary Somers*" had helped remove cargo from the steamer *Telegraph*, which had run aground on Gallinipper Bar in Matagorda Bay. After taking off the cargo, the "*Mary Somers*" herself was blown onto the reef and remained stranded for three days. Later, in August 1850, the *Texian Advocate* published a notice that "The U.S. Steam lighter Mary Somers" was being transferred for temporary work to Aransas and Corpus Christi bays on the lower Texas coast. The *Mary Summers* (always referred to as the "*Mary Somers*") is mentioned in subsequent newspaper accounts that indicate she operated principally in the Matagorda Bay and Lavaca Bay area through 1850.[32]

In June 1851, the quartermaster department again sold the *Mary Summers* to another New Orleans resident, Oswal (or Oswall) Wickeham. This sale, unlike the previous one, was successful. A 7 June enrollment recording the transfer notes that the vessel "called formerly by the name *Mary Summers*" was now named *United States.* Why the new owner, Mr. Wickeham, renamed the steamer is not reported, but it was presumably related to her service with the United States quartermaster department. Although there is no record that the government made major modifications to the steamer, after 1848 the vessel's depth is always given as 6′10″ inches, somewhat less than the 7′8″ given in earlier enrollment documents. This difference might be related to the use of more accurate measurements after 1848, but it is conceivable that the repairs made in Savannah in the summer of 1846 resulted in the lessened depth.

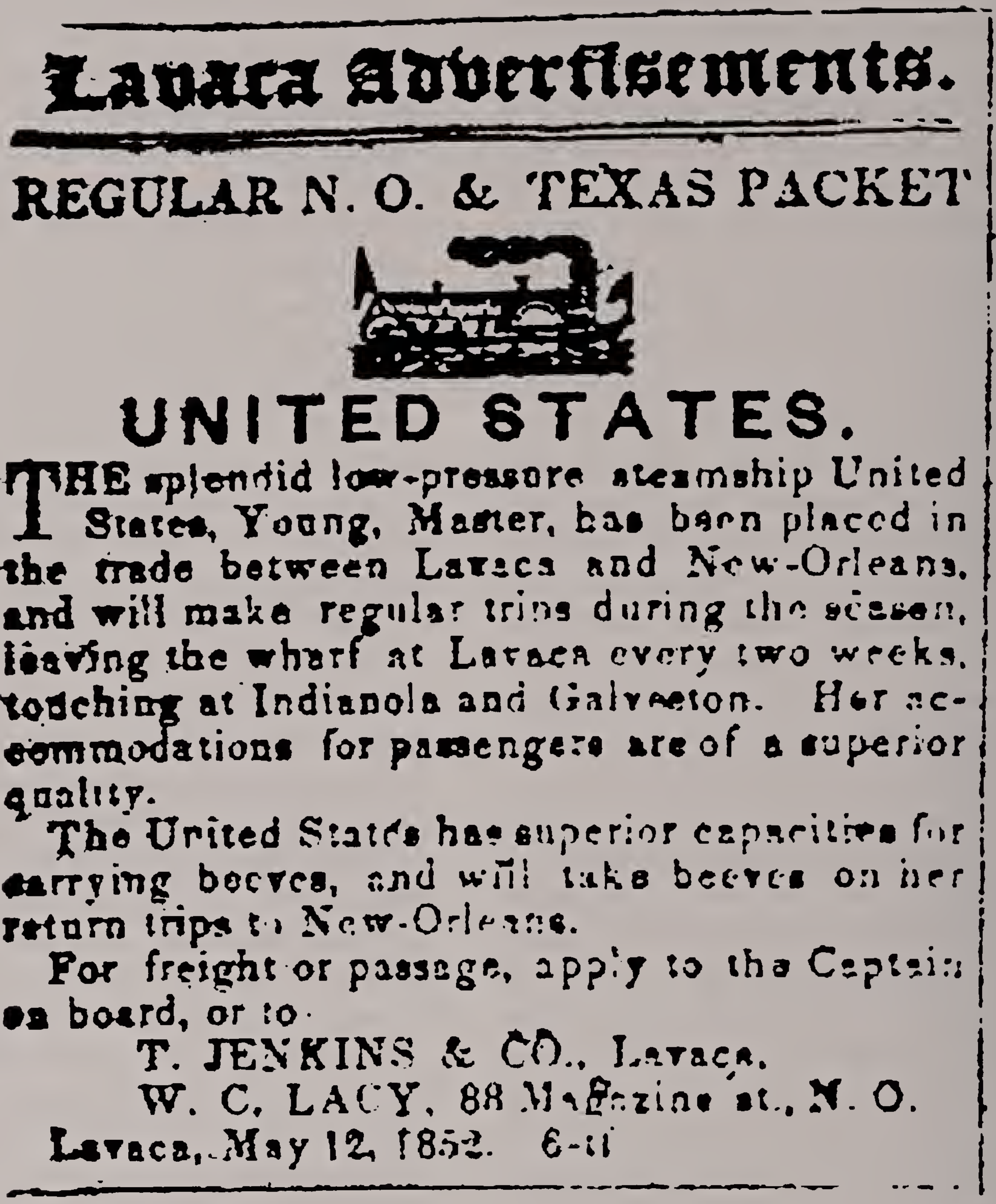
According to New Orleans enrollment documents, the former *Mary Summers* changed hands eleven times over the next ten years.[33] The rapid turnover may indicate that the vessel was in poor repair or difficult to keep in business profitably. Most of the owners of the newly named *United States* were residents of New Orleans or vicinity; however, Levi Shackleford, who was a part owner in 1852, was a resident of Bastrop County, Texas, and John Price, who was sole owner during part of 1853, was a resident of Holmes County, Mississippi. Over this ten-year period, two of the official port documents issued for the *United States* in New Orleans were registrations, rather than enrollments. Registrations were issued to vessels trading outside of the custom district they were enrolled in, usually indicating trade to foreign ports. The last extant enrollment for the *United States* was issued in New Orleans on 22 September 1858. Her new owner and master was a Julius Hanonmier (?), a resident of the city. No subsequent enrollment documents for the *United States* have been located. However, there is a document dated 5 January 1860 and written by the collector of the Port of La Salle in the District of Saluria, Texas, that noted that the enrollment issued in New Orleans on 22 September 1858 was being "surrendered" because of a change in ownership.[34] The sale of the vessel apparently took place in Texas, and it is presumed that the steamer was reenrolled there. This letter by the collector of the Port of La Salle appears to be the last official document relating to the *Mary Summers/United States.*

The majority of the owners of the *United States* seem to have been involved with just this single vessel or with two or three ships over time. A few, however, were heavily engaged in the ownership and operation of ships out of New Orleans. Of particular note is Richard B. Sumner who owned the *United States* from August 1851 to April 1852. Sumner, a resident of New Orleans, was involved in ship ownership from the early 1840s to after the Civil War. During this period, he was associated with over forty ships, barks, schooners, and steamboats enrolled or registered in New Orleans as sole owner, part owner, or owner's agent. He was a partner in J. P. Whitney & Company, a prominent New Orleans shipping firm, and in the late 1840s and early 1850s was president of the Ocean Line Towboat Company. Robert Sumner may have used the *United States* in his towboat company, but the fact that he obtained a registration for the steamer probably suggests he intended to use her mainly in foreign trade or the long-distance coasting trade.[35]

After Sumner's ownership, the *United States* seems to have worked principally in the coastwise trade, sailing to ports along the Gulf of Mexico, particularly between New Orleans and those in Texas. For example, in 1852, the *United States,* under the ownership of George C. Taylor & Co. of New Orleans and commanded by Captain John R. Young, was making regular trips between New Orleans and Lavaca, the small port town on the west side of Lavaca Bay. She departed Lavaca every two weeks, stopping at Indianola and Galveston on the way to New Orleans. One of her principal cargoes out of Indianola was live cattle for the New Orleans market. Advertisements noted that the *United States* had "superior capacities for carrying beeves." How the steamer may have been modified to transport these cattle is unreported. This was before the days of the well-known "cattle drives" when huge herds were driven north to rail heads for shipment east. In the 1840s and early 1850s, there were no railways in the region to carry cattle. The coastwise steamers provided the only convenient means for the cattlemen of western Texas to ship their stock. Shipping cattle by steamer out of Indianola had begun in 1849, and soon live cattle were an important export for many of the coastal Texas ports. By May 1851, the *Texian Advocate* reported that "This valuable trade is really assuming much importance" when it noted that the steamers *Globe* with "160 beeves and calves" and the *Galveston* with sixty "head of beeves" had departed Indianola for New Orleans. Traveling aboard a small steamboat with a load of half-wild Texas longhorns could make for an interesting, if not always pleasant, experience, for both passengers and cattle. On 20 May 1852, the *Indianola Bulletin* reported that the "little steamer *United States*" sailed on 2 May for New Orleans "with a lot of cattle on board" but did not reach the city until 9 May. The newspaper made no comment about any passengers who may have been aboard but lamented that the "stock must have suffered greatly on so long a voyage." That summer, another low-pressure steamer, the *James L. Day,* was placed on the Lavaca–New Orleans route. As a larger boat, the *Day* offered better facilities for passengers, plus, as an added inducement to passenger comfort, she did not carry cattle, as the *United States* did. Later in the year, the newspapers reported that the *United States* had quit running to Lavaca and Indianola and was traveling between New Orleans and Sabine Pass in eastern Texas.[36]

During this period, the *United States* occasionally appears in New Orleans newspapers. The *New Orleans Price Current* of 4 February 1854 noted the departure of the *United States* for Galveston under the command of Captain McPherson. On this trip, the *United States* carried five hundred sacks of salt, nineteen casks of bacon, and thirty-five boxes of "merchandise." Two months later, on 18 April, the newspaper reported that Captain McPherson had departed with his steamer for Apalachicola, Florida, with a varied cargo. These goods consisted of sixteen hogsheads and four barrels of sugar, seventy-four casks of bacon, seven tierces (a tierce is a large hogshead) of hams, sixty-two barrels of flour, sixty-two barrels of molasses, forty barrels of pork, ten barrels of whiskey, two barrels of beef, fifty pieces of bagging, 120 coils of rope, three bales of twine, 273 sacks of corn, ten sacks of coffee, four boxes of candles, and one tierce of rice.[37] The *Price Current* noted the return of the *United States* from Apalachicola on 29 April with twenty-five bales of cotton. These cargoes were probably typical of those carried by the steamer during much of her career in the Gulf of Mexico and also may be considered representative of the types of goods carried by other vessels in the coasting trade.

On 5 July 1854, Robert Murphy of New Orleans purchased the *United States* and obtained a registra-



Lavaca Advertisements.

REGULAR N. O. & TEXAS PACKET

UNITED STATES.

THE splendid low-pressure steamship United States, Young, Master, has been placed in the trade between Lavaca and New-Orleans, and will make regular trips during the season, leaving the wharf at Lavaca every two weeks, touching at Indianola and Galveston. Her accommodations for passengers are of a superior quality.

The United States has superior capacities for carrying beeves, and will take beeves on her return trips to New-Orleans.

For freight or passage, apply to the Captain on board, or to

T. JENKINS & CO., Lavaca.
W. C. LACY, 88 Magazine st., N. O.
Lavaca, May 12, 1852. 6-tf

Advertisement for the "splendid, low-pressure steamship" *United States* (ex-*Mary Summers*) appearing in the *Texian Advocate* (Victoria, Texas) on 12 June 1852.

tion document for the boat, suggesting he intended to use her in foreign trade. The New Orleans newspaper, the *Price Current,* does show that the *United States* arrived in the city from Havana on 28 July under the command of Captain Duke.[38] No further mention is made of the *United States* in the *Price Current* for 1854, and this one trip may have been the only foreign sailing made by the steamer while in private ownership. In December 1854, new owners, Laurent Millaud and William Ordill, enrolled the boat in New Orleans; subsequently, only enrollment documents were issued for the *United States,* indicating she was confined to domestic trade.

Other New Orleans newspaper entries show the *United States* traveling to other gulf ports, such as Mobile and St. Marks; however, in the late 1850s, the steamer seems to have largely restricted her activities to the Texas coast and New Orleans. The *United States* remained in service on the Texas coast for the next several years until the outbreak of the Civil War. An article in the "Commercial Bulletins" column of the 27 October 1860 issue of the *Indianola Courier* discusses the repairs made to the *United States* at Lavaca, Texas:

> The steamer *United States* was launched last Saturday at McBride's ship-yard where her hull has undergone thorough repair. This vessel was built in the best manner and in the opinion of experienced men her iron bottom is good for twenty years more of service. The repairs were made under the supervision of Mr. Geo. Parks, an experienced engineer and iron-worker and he is now engaged in repairing the boiler of the same vessel. With some alteration in her upper works the U. States could be made a handsome and commodious passenger vessel as well as a serviceable freight-carrier. We understand it is the purpose of Capt. Canfield to have her thoroughly fitted up, in a short while.

The captain, Charles W. Canfield, referred to in the article, was a longtime figure in the shipping trade in the Matagorda Bay–Lavaca River area. Canfield was involved in the trade to the town of Texana, located on the west bank of the Navidad River about thirteen miles inland from Lavaca Bay. Texana was a fairly important inland port from the 1830s until the coming of the railroads in the early 1880s. During this period, a large number of small sailing sloops and schooners and some steamers traded between Texana and towns on Matagorda and Lavaca bays, particularly Indianola and Lavaca.[39] The *Indianola Courier* of 1 December 1860 notes that "The *United States* is running regularly between this port and Lavaca," and Charles Canfield may have used the *United States* in the river trade to Texana.

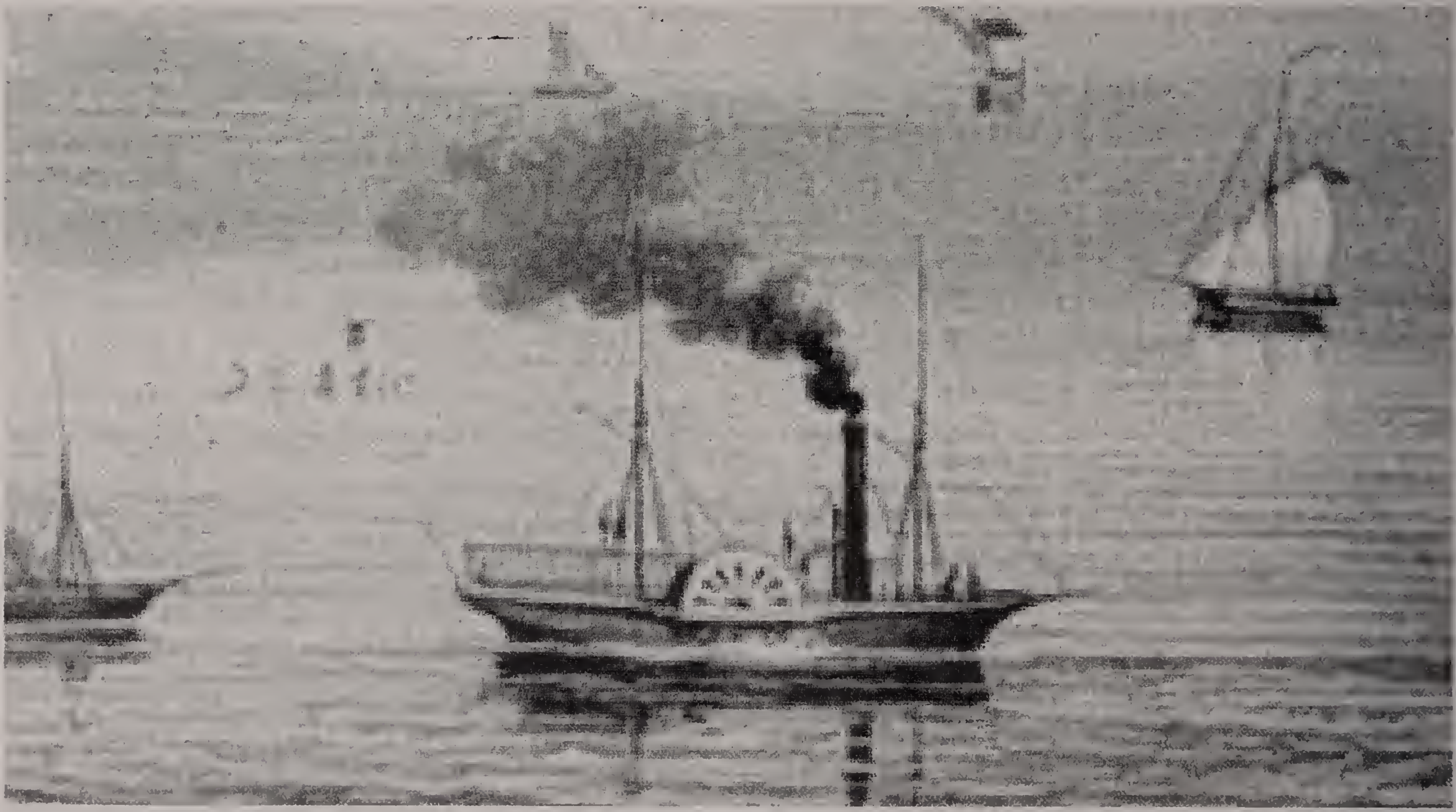
Whether or not Captain Canfield took the newspaper's advice and undertook the alterations to make the steamer more amenable for passengers is unknown, but the newspaper accounts imply that the *United States* was now confined to the very local trade around Matagorda Bay. Despite the fact that her iron hull was in good condition, the steamer was now over twenty years old, she was small, and her machinery was outdated. No doubt, Captain Canfield found it difficult, if not impossible, to compete with the many newer, larger, and more modern steamers traveling between Matagorda, New Orleans, and other distant coastal ports.

During this period, Indianola was one of the most active ports on the Texas coast, and in September of 1860, it attracted the attention of the sailor/artist Helmuth Holtz. A lithograph by Holtz shows the long wharf at Indianola surrounded by a number of boats of various types. One of the vessels shown is a small, sidewheel steamboat with a bowsprit, a round stern, and two short masts. Unfortunately, Holtz does not identify any of the vessels in the engraving, but everything we know about the *Mary Summers/United States* suggests that it looked very much like this little steamer. If this steamboat is not the *Mary Summers/United States,* it is one of only a few other similar, small steamers known to have been working on Matagorda Bay and on the Texas coast in 1860.

The American Civil War was to bring the *Mary Summers* to her end. No records of the activities of the *United States/Mary Summers* during the war have been located, but Captain Canfield would have been able to keep his steamer in service only for a short period of time after the start of hostilities. Once the Union blockade was in place off the Texas coast in the winter of 1861/62, his use of the steamboat would have been severely restricted. The *United States* may have been used to run the blockade, although no evidence for this has been found, or she may have been kept in service for a period of time along the inland waterways behind the coastal barrier islands. This avenue of trade, which extended down to Mexico, was vitally important to the Texas coastal towns now cut off from the gulf.[40] Eventually, even this trade was disrupted and ended by federal forces. On 25 October 1862, Union gunboats entered Matagorda Bay and took Indianola, later moving farther up the bay and bombarding Lavaca. The Union forces soon withdrew from Matagorda Bay, but they continued to maintain control of the Texas coast for the remainder of the war. Although no documents have been found that reveal the exact fate of the *Mary Summers,* it is likely that Captain Canfield, unable to keep his boat in business and not wanting her to fall into enemy hands, took her up the Navidad River and scuttled her before late October 1862. He may have intended to block the Navidad with the wreck as the remains presently extend almost half-way across the river. Canfield also would probably have removed as much of the useful machinery and parts off the boat as possible and destroyed what could not be taken.

For the next half century, the remains of the *Mary Summers/United States* lay in the Navidad, largely ignored because of the isolated location. Over that time, the identity of the steamer was forgotten. A United States Army Corps of Engineers survey conducted in 1913 mentions the remains only as an "old steel steamer." However, the story that the wreck was that of a steamboat sunk during the Civil War persisted, and it is still one recounted by residents in the area.

In many respects, the *Mary Summers* exemplifies the early steamboats operating along our southern coasts. During her twenty-three-year career, she carried the typical and often mundane cargoes of the day, with cotton being the most common. She tied small towns and plantations to larger economic centers like Savannah and New Orleans. The story of these steamers, as well as those of the sailing vessels in the coasting trade, has largely gone untold, despite their importance in a vast and complex trade network. Typical in her trading activities, the *Mary Summers* was unique in other respects. As one of the earliest steamboats in the United States built of iron,



Detail of an 1860 lithograph entitled *View of Indianola from the Texana, September 1860* by Helmuth Holtz. It shows a small sidewheel steamer in Matagorda Bay that may be the *Mary Summers* or a very similar vessel. Courtesy of the Library of Congress.

the *Mary Summers* represented the leading edge of a new technology, foreshadowing what was to come in ship construction. Her first owner, Gazaway Lamar, demonstrated acumen and farsightedness in his purchase of what at the time was a relatively expensive vessel. This expense could be justified by the value and magnitude of the cotton trade along the Savannah River and through the port of Savannah. The economic importance of this trade is expressed in the fact that a half-dozen iron-hulled steamboats were operating on the Savannah River in the 1830s, representing a significant proportion of the entire number of iron boats in the United States.

The *Mary Summers* served her country during the Mexican War, although the details of that service have not yet come to light. The *Mary Summers,* as the *United States,* also played a vital role in the early economic history of the new state of Texas. Prior to the construction of good roads and the coming of the railroads, Texas was heavily dependent upon maritime commerce. Large numbers of sailing vessels and steamers traveled to and from the state's gulf ports. Some, like the *Mary Summers/United States,* were small vessels involved in the local and regional coasting trade, many coming out of New Orleans; others were larger ships sailing from eastern or transatlantic ports. Unfortunately, the importance of the gulf trade to the early history of Texas has largely been ignored.

The specific events leading to the sinking of the *Mary Summers/United States* are lost to history. All of the evidence at hand indicates that the steamer was scuttled during the early years of the Civil War. By this time, the vessel was almost a quarter century old; her machinery was certainly outdated and possibly worn out. A technological marvel when built, she had been supplanted by larger vessels driven by more powerful and more efficient engines. Her apparent relegation to the somewhat isolated and peripheral local trade in the Matagorda Bay area during the last years of her life may be a reflection of her increasing obsolescence and inability to compete with newer steamers. The remains of the *Mary Summers* still rest in the murky waters of the Navidad River, one of the oldest, if not the oldest, iron steamboats discovered in this country. Her hull, after 160 years, is in surprisingly good condition, a tribute to her builders and a statement on the value of what, in 1838, was an innovative technology, the iron hull.

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NOTES

1. The archaeological research on the *Mary Summers* was conducted by Coastal Environments, Inc., for the Galveston District of the U.S. Army Corps of Engineers. The full results of the research are presented in Charles E. Pearson, Stephen R. James Jr., Kay G. Hudson, and James A. Duff, *Underwater Archaeology along the Lower Navidad and Lavaca Rivers, Jackson County, Texas* (Baton Rouge, La.: Coastal Environments, 1993). Although unidentified at the start of the 1991 archaeological study, the existence of the wreck had long been known, appearing on government survey maps and having been assigned Texas archaeological site number 41JK9.

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7. Letter from Gazaway B. Lamar to Quartermaster General Thomas S. Jesup, 29 December 1846, Quartermaster Vessel Papers, file of the *De Rosset* (Record Group 92), National Archives, Washington, D.C.

8. Brown, "The *John Randolph,*" 41. Information on the Baltimore firms that assembled the *Mary Summers* and installed the engine comes from the Randall file, Baltimore shipbuilders, Manuscript 2264F and the Watchman & Bratt manuscript, MFA 15.06, Maryland Historical Society, Baltimore.

9. Registration no. 68 for the *Mary Summers,* Port of Baltimore, 18 May 1839, records of the Bureau of Marine Inspection and Navigation (Record Group 41), National Archives, Washington, D.C. No record of for whom the *Mary Summers* was named has been found. The *De Rosset's* name derives from the De Rosset family, associates and, possibly, kinsmen of Gazaway Lamar.

10. Brown, "The *John Randolph,*" 42.

11. Registration no. 68 for the *Mary Summers,* 18 May 1839.

12. Carpenters certificate for the *Mary Summers,* Port of Baltimore, 18 May 1839, records of the Bureau of Marine Inspection and Navigation (Record Group 41), National Archives, Washington, D.C.

13. *Wilmington Chronicle,* 23 April 1839, quoted in Brown, "The *John Randolph,*" 42.

14. Enrollment no. 10 for the *Mary Summers,* Port of Savannah, 29 October 1839, records of the Bureau of Marine Inspection and Navigation (Record Group 41), National Archives, Washington, D.C.

15. *Savannah Daily Georgian,* 29 November 1839.

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19. Frank S. Buckingham, quoted in Brown, "The *John Randolph,*" 38–39.

20. *Savannah Daily Georgian,* 12 July 1846. Record of the sale is noted on the back of enrollment no. 11 for the *Mary Summers,* Port of Savannah, 12 July 1842, records of the

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26. Letter from Captain H. L. Wayne to General Thomas S. Jesup, quartermaster general, 24 July 1846, file of the *De Rosset.*

27. Letter from Captain H. L. Wayne to General Thomas S. Jesup, quartermaster general, 8 September 1846, file of the *De Rosset.*

28. Report of Captain Fenn Peck to Major General Thomas S. Jesup, quartermaster general, 6 February 1847, file of the *Mary Summers.*

29. Ownership information on the *Mary Summers* after the Mexican War is drawn largely from the consolidated New Orleans registration and enrollment records produced by the Work Projects Administration entitled *Ship Registers and Enrollments of New Orleans, Louisiana, 1804–1870,* 6 vols. (New Orleans: Work Projects Administration, Survey of Federal Archives in Louisiana, 1942).

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37. *New Orleans Price Current,* 4 February 1854 and 18 April 1854.

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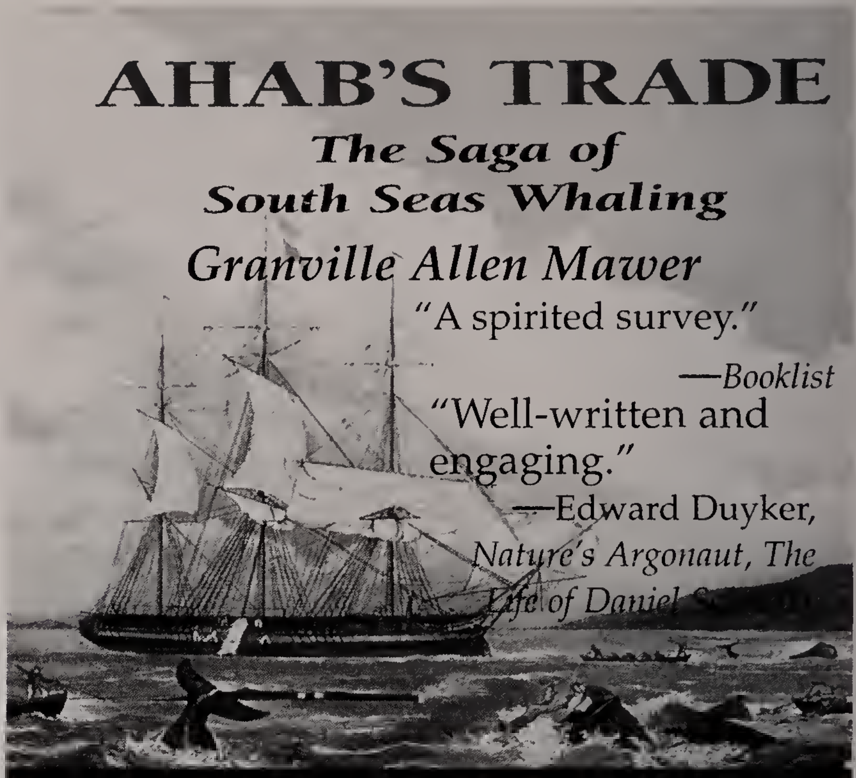

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AT THE TIP OF THE SPEAR:

THE U.S. NAVY AND THE SPANISH CIVIL WAR

by Adam B. Siegel

Claude G. Bowers, the U.S. Ambassador to Spain during the Spanish Civil War, subtitled his book *My Mission to Spain: Watching the Rehearsal for World War II.*[1] Describing the Spanish Civil War as a rehearsal for or a prelude to World War II proves simply inadequate for the United States. Instead, for the U.S. government and the American people, it remained principally a conflict in a faraway land from which Americans needed rescue. Like so many of these small-scale humanitarian evacuations, the activities of U.S. Navy ships (and one coast guard cutter) rapidly faded into the dim historical past as world events and a World War overshadowed their actions.

The Nationalist (Fascist) rebellion in Spain surprised the world in July 1936. The first reports from Spain presented a murky situation, with many expecting a rapid resolution, either a quick suppression of the coup, as had occurred in 1934, or an overthrow of the Republican government. Within several days, the threatening situation prompted steps to protect foreigners in Spain.

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The British were the first to employ their forces for evacuations. In mid-July 1936, at the tail end of the Abyssinia crisis with Italy, the Royal Navy had over one hundred warships (including three battleships and an aircraft carrier) in the Mediterranean. On 20 July 1936, the Royal Navy destroyer *Shamrock* left Gibraltar for Malaga, Spain, to evacuate foreigners. By 24 July, France, Germany, Italy, and the United States had joined Great Britain in responding to the situation with naval forces.[2]

The United States took its first formal steps to protect Americans with the opening of the embassy in Madrid as a safe haven on 20 July 1930. At that time, the U.S. Navy had an unusual concentration of forces in European waters, with three battleships (AK-17 [formerly BB-32] *Wyoming,* BB-33 *Arkansas,* and BB-37 *Oklahoma*) on a midshipmen training cruise in Europe with a new ten-thousand-ton treaty cruiser (CA-39 *Quincy*) crossing the Atlantic on its maiden voyage. The coast guard cutter *Cayuga* was also in European waters conducting a cadet training cruise. The next day, the navy department ordered *Oklahoma* and *Quincy* to Spain in a "purely precautionary" move.[3]

U.S. government officials quickly considered the possibility that the fighting in Spain might turn into a long crisis. On 22 July, Secretary of State Cordell Hull met with Admiral William H. Standley, the chief of naval operations, to discuss the advisability

USS *Oklahoma* (BB-37) crewmen holding refugee children during the evacuation of refugees from Spain in 1936. Collection of the USS *Oklahoma* Association and Lloyd R. Payne in the Photographic Section, Naval Historical Center, Washington Navy Yard.

of reestablishing the European squadron. The navy department had disestablished this squadron in 1929, after a century's existence, at state department insistence that "European conditions no longer justified it." Now, with unsettled conditions in Europe, Hull thought a squadron could show the flag and give assistance to endangered Americans.[4]

The reports from Spain turned increasingly frantic in these early days with, for example, Consul Lynn W. Franklin in Barcelona reporting a dangerous situation and requesting that *Quincy* sail directly there rather than to Gibraltar. In response, Hull took two steps on 23 July 1936. He requested that the American Export Lines divert its liner *Exeter,* then on a cruise in the Mediterranean, to Marseilles to disembark its passengers and then head to Barcelona to pick up American refugees. The company paid the estimated cost of fifteen thousand dollars for this diversion because "it regarded the request as in the same category as a rescue at sea, something that could not be refused." Three consular officials sailed with *Exeter* from Marseilles.

In addition, Hull arranged for *Cayuga* to reinforce the navy ships en route to Spain. Also, on 23 July, the navy began preparations to send additional warships to Spain although the plans to reestablish the European squadron were put on hold. President Roosevelt questioned the necessity of sending additional warships. He favored the use of merchant vessels and hoped to rely on the British and other navies that had already demonstrated their willingness to rescue stranded Americans.[5]

Along with general concerns over Americans caught up in the conflict, Ambassador Claude G.

Bowers's situation occupied much attention. The revolt found Bowers, along with much of the diplomatic corps, at the summer capital, San Sebastian, where he was reportedly "a virtual prisoner." Standley ordered *Cayuga* at high speed to San Sebastian, in part to determine the status of Bowers. In San Sebastian, *Cayuga*'s crew found that the embassy staff "has no information whereabouts Ambassador Bowers since Tuesday . . . and in case his whereabouts unknown [they suggest] *Cayuga* proceed Fuenterrabia and inquire."[6]

Bowers, in fact, remained almost unconcerned about the situation around him, spending most of his time at his villa in Fuenterrabia, five miles outside San Sebastian, unaware that his telegraphs were not reaching Washington. Bowers dismissed Washington's concerns as exaggerated, not realizing the impact that a missing ambassador could have on the government amidst a civil war.[7]

Bowers was unwilling to leave; instead, he preferred that *Cayuga* remain in port to provide communications support to the cutoff embassy staff. *Cayuga* left for St. Jean de Luz, France, with evacuees according to Bowers's 27 July 1936 diary entry:

> load of pessimistic and panic-stricken men . . . who [were] sent to snatch us from the jaws of hell [have] found us serene in the midst of the "rabble," meaning the people and the republicans at Arun. . . . Very solemnly Johnson pictured my position here as one of deadly peril and urged me to cross the border. . . . I could not see this menace as probable . . . I thought it cowardly to desert [the servants] . . . I went away disgusted but Washington left us in no doubt about its desire.
>
> Late [that night, Undersecretary of State] Carr . . . called me on the long distance phone and suggested that I take the *Cayuga* and make a tour of the entire north coast in search of Americans. That suits me perfectly.

Bowers thus left Fuenterrabia reluctantly. He boarded *Cayuga* for a cruise along northern Spanish ports to evacuate Americans and to communicate with consular officials. After a week aboard his floating embassy, Bowers departed on 5 August and joined most of the rest of the diplomatic corps in self-imposed exile in southwestern France.

On 29 July 1936, *Cayuga* joined *Arkansas, Wyoming,* and *Oklahoma* in the roadstead at Bilbao. There, the cadets transferred from *Cayuga* and *Oklahoma* to *Arkansas* and *Wyoming,* since the latter two were soon to depart for the United States. The three U.S. ships (*Oklahoma, Quincy*, and *Cayuga*) soon established a pattern of shuttling between French ports or Gibraltar and Spanish ports to evacuate American citizens and support state department officials with transit to ports without a consulate. The need to respond to pleas for immediate assistance from consuls left all scheduling questionable in these early months of the civil war.[8]

By mid-August 1936, the U.S. government decided to relieve *Oklahoma* and *Quincy,* neither of which the navy department considered as particularly well suited for or well employed in evacuation operations. On 17 August, two destroyers (DD-231 *Hatfield* and DD-235 *Kane*) sailed from New York for duty in Spanish waters. The cruiser *Raleigh* (CL-7), the former flagship of the European squadron, soon followed. This followed a decision to reinstitute the squadron, at least temporarily, now to be called Squadron 40-T, in light of the expectation that the civil war might continue indefinitely.[9]

By the end of August 1936, these two destroyers joined the evacuation operations. On 27 September, *Raleigh*'s arrival in Gibraltar marked Squadron 40-T's formation, with the two destroyers and *Cayuga* filling out the squadron. *Cayuga*'s captain disliked the assignment and angled for a replacement cutter to relieve his ship off Spain. The commandant of the coast guard sent the following message in response: "Headquarters strongly disapproves the action of the Commanding Officer of the *Cayuga* in requesting the GEORGE W. CAMPBELL be assigned to relieve the *Cayuga*." All concerned soon decided that evacuation efforts no longer required *Cayuga*'s presence. Thus, when *Cayuga* sailed for the United States on

2 October, Squadron 40-T consisted of U.S. Navy ships. It remained at this force level through the end of operations in 1940. The navy department's practice of sending many new warships to European waters for shakedown cruises continued to the eve of World War II. When in European waters, these ships remained available to Squadron 40-T's commander for emergencies.[10]

Evacuations continued through the fall of 1936, with some 1,300 evacuated by USN ships (and *Cayuga*) by the end of the year.[11] Requirements dwindled as time passed, with just a few evacuations through 1937 and just a brief flurry of activity in 1938.

The squadron's duties focused on "showing the flag," intelligence gathering, and remaining on call for further crisis situations. With the prospect of a general conflict looming over Europe in the late 1930s, the attention of the Squadron 40-T commander shifted away from Spain to the rest of the continent. By mid-1938, Rear Admiral H. E. Lackey, then commanding the squadron, began communicating with U.S. embassies throughout Europe to encourage evacuation planning and coordinating with the embassies for navy support based on "our experiences in Spain." In his letters, he provided tentative plans for emergency evacuations and requested guidance as to how to improve the plans.[12]

Squadron 40-T remained in existence for over a year following the end of the Spanish Civil War in April 1939. With the outbreak of World War II, Squadron 40-T moved from French ports to Lisbon, Portugal, so as not to be based in a belligerent's ports. Over the next year, the navy ships played only a very minor role in evacuations from war zones; U.S. merchant ships and U.S. Army transports moved Americans and others out of Europe to the United States. In the fall of 1940, following the Anglo-American destroyers-for-bases agreement, Squadron 40-T's existence came to an end—the destroyers provided to England belonged to the same class of ships as the U.S. Navy ships operating from Portugal. To avoid an attack based on mistaken identity, the navy brought the ships back to the United States and disestablished Squadron 40-T on 22 October 1940.[13]

Many historians refer to the Spanish Civil War as a rehearsal for World War II. While this might be somewhat true for the European powers, especially Germany and Italy, the Spanish Civil War was an entirely different situation for the United States. Instead, it fitted into a pattern that had been part of navy tradition since almost the earliest days, with the ships present as neutrals to protect U.S. interests amidst a greater conflict.

Real risk exists for the naval forces operating amid or near another conflict. The attacks on USS *Panay* in 1937, USS *Liberty* in 1967, and USS *Stark* twenty years later provide prominent examples.[14] In the late 1930s, the U.S. Navy's two forward squadrons—the Asiatic squadron and Squadron 40-T—found themselves in just such situations.

Foreign warships might be threatened in any number of ways. Captains often feared that forces from either side (or simply thugs) might attack sailors assisting in evacuations. On 30 July, the captain of the German warship *Deutschland*, which had just entered Bilbao after a rapid transit from the Baltic, came close to sending an armed party ashore to protect evacuation efforts. A Royal Navy captain quickly dissuaded him of this. As Ambassador Bowers thankfully recorded, the British officer restrained the German: "But you can't do that, it will make it impossible for all of us." The German, evidently, "seemed surprised to learn that all was quiet in Bilbao and not bristly with armed men."[15]

The German's fears were not unique or irrational, although no attacks occurred against the evacuation forces during 1936. *Cayuga*'s first landing force, however, experienced an encounter that was potentially very dangerous: "shortly after dark a body of men armed with machine guns trained them on the boats and demanded that they leave the harbor. After some talk, the boats were permitted to remain until [the] Lieutenant's . . . return."[16]

From the first days of conflict, the Spanish Civil War threatened neutral shipping with attacks often coming against ships at sea. One of the earliest bombing attacks came against a U.S. merchant ship, SS *Exmouth,* as it transited through the Strait of

Gibraltar on 22 July 1936. As part of their efforts to stop supplies, both sides in the conflict (though the Nationalists far more frequently) seized ships engaged in trade with the other. Squadron 40-T had orders to prevent seizures when they occurred on the high seas. In January 1938, the Nationalists seized the SS *Nantucket Chief,* en route from the Soviet Union to Barcelona with a load of oil. No U.S. Navy ship was near *Nantucket Chief* when Nationalist warships intercepted her.[17]

From the first, the navy recognized this threat. *Oklahoma*'s crew exercised their weapons and moved ammunition to ready lockers as it sailed from Cherbourg to Bilbao on 23 July 1936. *Cayuga,* with Bowers aboard, did not enter Gijon on 1 August as the rebel cruiser *Cervera* headed toward a bombardment of the city.

On at least one occasion, Nationalist forces specifically avoided firing that might endanger U.S. Navy ships. When Republican aircraft attacked

The motor launch of the USS *Oklahoma* (BB-37) with refugees during their evacuation from Spain in 1936. The officer in the stern is probably Commander Murphy, the executive officer. Collection of the USS *Oklahoma* Association and Miscilaw Jozwiak in the Photographic Section, Naval Historical Center, Washington Navy Yard.

Cervera as she bombarded Santander on 9 July 1936, she did not fire as the attacking aircraft flew over *Kane*. Despite this, Lieutenant Commander J. D. Alvis, *Kane*'s commanding officer, felt obliged to make this report: "While at no time was there any apparent danger to the *Kane*, the possibility of sudden incidents with the most serious consequences cannot be overlooked."[18]

This was not the only case of planes bombing ports with U.S. ships present. *Cayuga*'s crew watched "an airplane flying at about 10,000 feet altitude drop bombs apparently directed toward the oil docks in northwest corner of [Bilbao's] harbor."[19] The most serious incident against a U.S. warship came on 30 August 1936, when "a tri-motor, low black-winged monoplane" attempted to bomb *Kane*. The logbook recorded the incident as follows:

> At 1610 unidentified, tri-motored, low black winged monoplane approached ship from stern and dropped 2 bombs that exploded 1000 yards astern. Went to general quarters, and maneuvered on various courses at various speeds to avoid bombs. At 1625 plane returned and dropped 1 bomb, distance of miss 150 yards. At 1626 opened fire on plane with antiaircraft gun, fired 2 rounds. At 1631 plane circled back toward ship, resumed fire on plane with anti-aircraft gun. At 1632 plane dropped 3 bombs which exploded 200 yards abeam to starboard. At 1634 ceased firing, total rounds expended, 10 rounds 3 inch 23 cal. SPD 2235 service shrapnel ammunition, no casualties and apparently no casualties inflicted on plane. At 1645 plane retreated in north easterly direction and disappeared from sight.

The U.S. government protested this action to both the government and the rebels—both denied any knowledge or responsibility for the bombing.[20]

Such attacks occurred against many foreign ships—both naval and commercial—with many ships less lucky than *Kane*. On 29 May 1937, Republican bombers killed twenty-two and wounded eighty-three aboard the the German battleship *Deutschland*. Two days later, a German cruiser and four destroyers fired two hundred shells into Algeciras in the only open intervention by a foreign warship in the civil war. These attacks against foreign ships continued throughout the war. The August 1937 torpedoing of a British destroyer, amid a large number of "pirate" submarine attacks, helped lead to the calling of the Nyon Conference, which resulted in an agreement for multinational antisubmarine patrols in the Western Mediterranean.[21]

The Nationalists most aggressively pursued the war at sea. In addition to the clandestine Italian submarine activity that led to the Nyon Conference, Nationalist shelling, bombing, and mining of Republican port areas threatened foreign navies. To reduce the chance of hitting a foreign vessel, the Nationalists announced safe areas in roadsteads that they would not attack, called on foreign warships to remain lighted at night if in Spanish waters, and declared which ports were mined. Mining posed a broad threat. In February 1937, for example, Squadron 40-T made this report:

> On the North coast of Spain, Rebel mining operations are actively continued. . . . Heavy gales have torn many mines loose from their mooring and they have been sighted off the West coast of France as far north as La Rochell. . . . Information from Ambassador Bowers via the State Dept to the effect that Santander is not mined and that Bilbao is swept and open to traffic has not been confirmed, and the contrary is believed to be true. Mines are undoubtedly swept up, but additional ones are immediately laid by Insurgents, so that there is too much hazard in attempting to enter those ports or Gijon (about which little is known). The additional menace of drifting mines throughout this area constrained the Squadron Commander to recommend that *Hatfield* should not visit Bilbao, Santander, and Gijon, and should only visit Bermeo and Suances in case of emergency. Even on passage between St. Jean de Luz and the

> Gironde, *Hatfield* was advised to proceed only in daylight.[22]

As with these orders, the navy attempted to reduce risks by placing greater restrictions on ships operating in Spanish waters. In response to the *Kane* incident, Hull announced on 10 September 1936 that U.S. Navy ships would no longer operate in Spanish waters unless exigencies on the ground required their presence. Hull argued that only the state department should authorize such operations. This, however, went against navy traditions of freedom of operations and was opposed by the Captain W. A. Hall, commanding officer of *Oklahoma,* who appealed these orders.[23]

During the Spanish Civil War, the many navies operating in the vicinity cooperated in ways that ranged from the Italian and German semiclandestine support for Franco (including providing intelligence on Republican ship movements, resupplying rebel warships, and conducting secretive submarine attacks), nonintervention and Nyon (antipiracy) patrols, and daily cooperation in evacuation operations.[24] The U.S. Navy cooperated in and greatly benefited from the informal arrangements that characterized this last category.

From the first days of the crisis, the outside powers cooperated in evacuating foreigners—Royal Navy warships and Italian merchant ships had evacuated hundreds of Americans from Spain before the arrival of the first U.S. ship. Therefore, when *Cayuga* arrived in San Sebastian on 24 July 1936, her "boat returned . . . from visit to U.S. consular representative ashore having found that Americans desiring evacuation were taken away this morning by an English destroyer." In addition, with the cutoff of telephone and telegraphic links between Spain and the outside world, foreign navies provided communications support to consuls attempting to contact Washington or U.S. Navy ships.[25]

The U.S. Navy profited from this cooperation. The navy had no infrastructure to support long-term operations in Europe. Repair facilities and other support provided in Gibraltar and French ports were vital to the squadron's operations. Royal Navy intelligence support was less visible. While tensions between the U.S. Navy and the Royal Navy simmered due to naval arms control, U.S. Navy officers regularly reported the generous and complete support that Royal Navy intelligence facilities provided to U.S. warships—Squadron 40-T's commander, for example, had complete and total access to the British intelligence facility at Gibraltar prior to any formal Anglo-American agreements. Captain W. F. Amsden, commanding officer of *Quincy,* began the trend and constantly reemphasized the critical importance of British assistance.

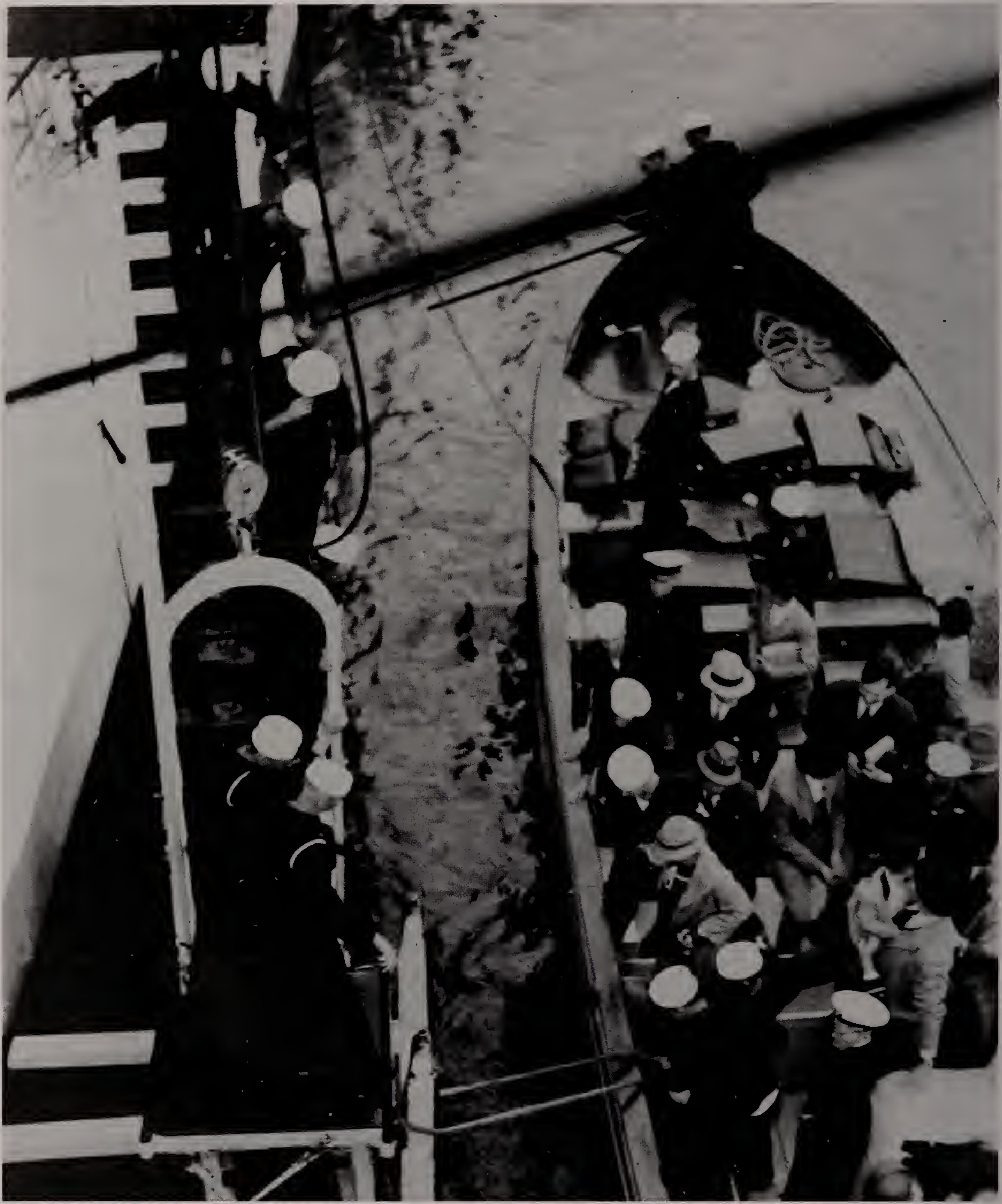
> In this connection, the Commanding Officer desires to emphasize once more the extreme cooperation and courtesy extended in every case by His Majesty's Government in Gibraltar. . . . the exchange of [intelligence] information has been complete and most helpful.

These positive reports, which often reached Roosevelt, might have influenced the path toward Anglo-American cooperation in the late 1930s.[26]

While executing their responsibilities in Spain, state department and navy personnel interacted on an almost daily basis. For the most part, they managed to make the best of a bad situation and cooperated to get the job done. Frequently, message traffic from one side complemented the other organization's efforts generously.[27]

The relationship that Ambassador Bowers had with the navy often proved less than rosy. In fact, it often led to mutual recriminations between him and the navy staff in Washington. This tension reached a culmination in early August 1936 after an incident in Bilbao.

Protecting citizens took many forms. In addition to fears that Americans might accidentally get caught up in the Civil War, the U.S. government also feared that either side might use Americans as hostages or otherwise imprison them. The first major instance of this came on 30 July 1936, when the Basque government in northern Spain considered



View of the embarkation of refugees on the USS Oklahoma (BB-37) at Bilbao, Spain, during the Spanish Civil War in August 1936. Collection of Captain W. A. Hall, Photographic Section, Naval Historical Center, Washington Navy Yard.

nationalizing the Firestone tire plant. Company officials feared that they would have to turn over secret formulas to fulfill contractual obligations if they left Spain. Bowers and staff left *Cayuga* and went to meet with the governor who "sent an armored car and an Assault Guard Officer to fetch" them from the pier.

Bowers quickly moderated an agreement. The Firestone officials agreed to maximize production, and the government agreed not to nationalize their company. In addition, Bowers secured an agreement for assistance in evacuating Americans from Bilbao as the "Harbor master said he personally would see to it that no further attempt would be made to prevent the embarkation of foreigners at the closer pier."[28]

A reporter who had secured passage aboard *Oklahoma* prior to her departure from France to Spain attended this meeting. Hull soon cabled Bowers in regards to this meeting as the reporter's story stated that Bowers had threatened the local officials with the presence of the American ships in the harbor. Bowers was quoted in this manner:

> I came to explain the presence of American warships in your harbor. I understand that there are still some Americans in your province and I want them to be given freedom to leave and suitable protection. I'm sure you will do that. But that is why the *Oklahoma* is here.[29]

Bowers responded strongly. He indicated that, while he had "laughingly referred to the presence . . . of American warships . . . in the harbor at Bilbao and explained the reason," he had only done so "because the Consul had told me that the concentration had caused some talk and uneasiness." Bowers severely questioned the reporter's presence aboard *Oklahoma.* This incident only heightened the growing tensions between the navy and Bowers; disagreements with appeals back to Washington often marked their relations.

Bowers remained frustrated by his inability to direct navy movements. Navy department orders explicitly stated that captains should cooperate with state department personnel but remain independent and subject to navy orders. In late July 1936, Bowers wired the secretary of state to "request *Cayuga* be kept my sole disposition." Bowers wanted a ship in St. Jean de Luz, France, to provide support to his temporary embassy and ordered *Cayuga* to remain in port. Captain W. A. Hall, commanding officer of *Oklahoma* and in command as the senior officer present in the area, first learned of this when *Cayuga*'s captain refused an order to sail for Bilbao on 6 August 1936 to provide a relief for *Oklahoma* when she left the port. "The Secretary of State informed Ambassador Bowers of the necessity of keeping *Cayuga* constantly on evacuation work." In fact, rather than keeping a ship in France, Hull emphasized the importance of keeping ships in southern Spanish waters. Following Hull's message, Bowers explained his actions.

> As crisis moderates Americans if any in the northern interior . . . will move to northern coast and there should be an American ship ready for that emergency in northern waters. In Bilbao all Americans evacuated except three executives of Firestone who prefer to stay. . . . Is it the intention to keep a battleship regularly at Bilbao for the protection of these three men? Informed as I was by Washington that *Oklahoma* and *Cayuga* at my disposal I gave the order authorizing *Oklahoma* to leave Bilbao for a single day to provision. I understand this is now countermanded . . . must maintain contact there. For that reason thought was to have *Cayuga* within reach.

Additionally, Hull noted in his message that he would "welcome any comment by [Bowers] in the light of the foregoing. Wendelin is carrying a heavy load do you have any suggestion as to a plan for getting some relief for him at Madrid?" Bowers, of course, had a response:

> Wendelin with whom communication has been found impossible has Fugun and Unfer with

> him. Utterly impossible to reach Madrid from this quarter because of fighting in the mountains. Madrid can be reached from Valencia. Suggest you order someone from Paris to Madrid by way of Valencia.[30]

Bowers never got back to Madrid during the entire civil war. Instead, the 31-year-old third secretary of the U.S. embassy, Eric C. Wendelin, remained in charge of a short-staffed embassy until the embassy evacuated Madrid. Bowers made this statement:

> aside from the fact that I was forced here [to St. de Luz, France] by my Government, and that most of the Diplomatic Corps are here, my going to Madrid would confirm my picture of the situation in Madrid . . . since I would have no such means of communication there as here.

Yet such messages did not protect Bowers from criticism about his absence from Madrid. Bowers's appointment as ambassador to Spain resulted, not in small part, from his participation in party politics. Bowers viewed press coverage from this perspective; thus, as with all negative comments from the press, he noted that "of course it is politics" when articles criticized him for remaining in France.[31]

In mid-August 1936, Bowers again attempted to guarantee that a ship remain available to the embassy. In his message, he made this argument:

> Conditions possibly developing at Bilbao and Vigo make important if possible we have vessel at both places and at St. Jean de Luz. . . . Feel strongly we should insist that all Americans leave Spain and especially Madrid where the danger is greatest. I recommend that those refusing opportunity to leave be asked to sign statement to that effect together with their reasons.

Bowers contrived with *Cayuga*'s captain to ensure that his recommendations would go up both the state and navy department chains at the same time. The captain made this recommendation:

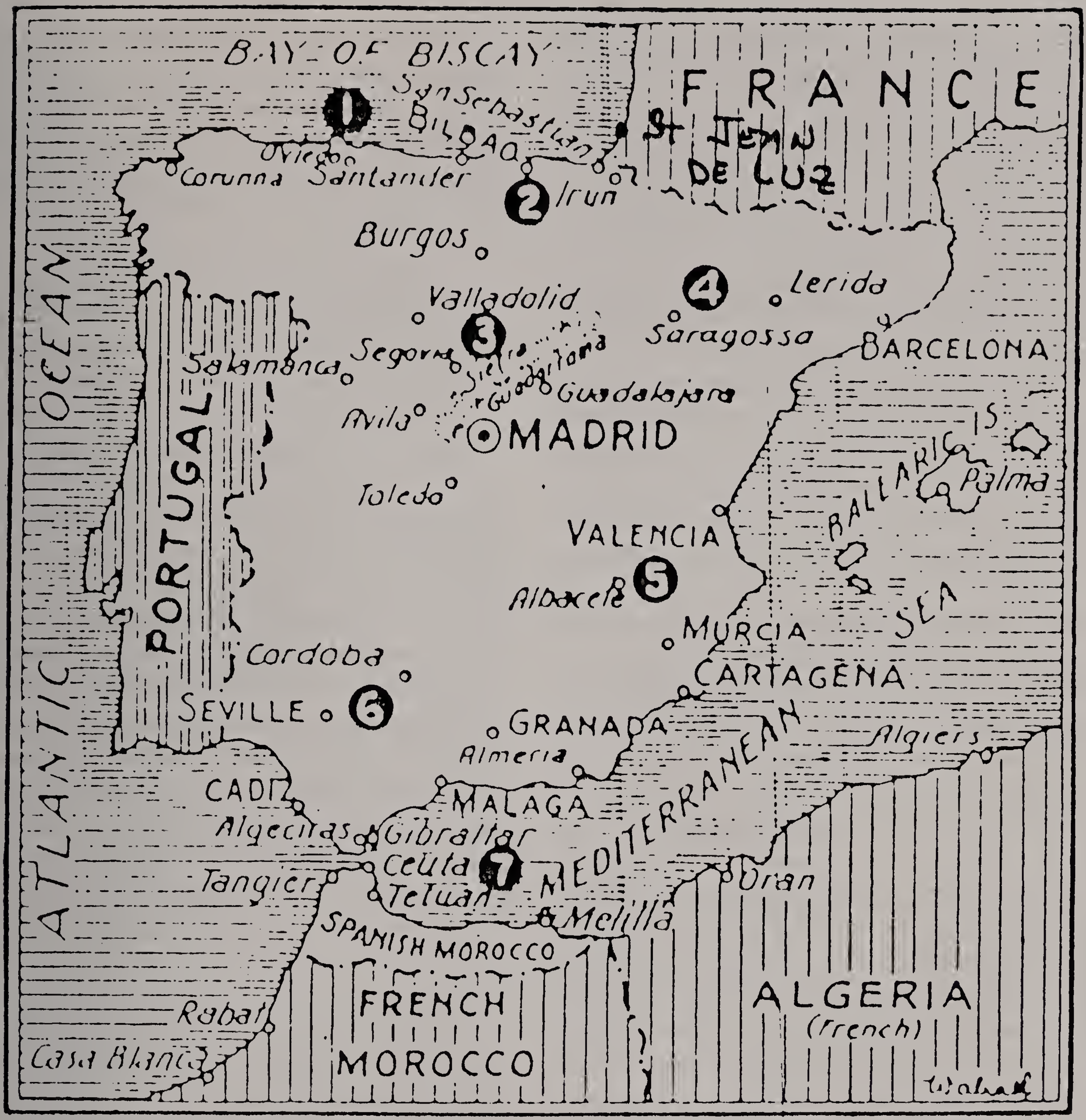
> After careful consideration conditions Bilbao and Vigo decided advisable have one vessel at each port for protection consuls and other Americans and for communications. Consider advisable have third vessel at St. Jean de Luz for communication and to relieve other two vessels in rotation . . . Present conditions . . . may become worse in near future. Did not desire make this recommendation to you until I had conferred with American Ambassador Bowers who approved proposed plan and has already sent dispatch to State Department for your information to that effect.

Captain Hall of *Oklahoma* responded sharply, noting that "there are Consuls in 8 different ports in Spain and it is obvious that 3 ships cannot offer continuous protection to all" and questioned why *Cayuga* remained in France if the conditions were worse in Spain.[32]

This tension between Bowers and the navy officers assigned to Spain continued throughout the period of intense operations. One might wonder at Bowers's impression of this correspondence since he recorded this comment in his diary:

> an inquiry today from American newspapers about a malicious lie . . . to the effect that I tried to assume command of the Navy vessels; that I quarreled with the officers, sent hot telegrams to the State Department, and was instructed by it to leave the ship. It is a putrid piece of low politics.[33]

Clearly, the reported disagreements had occurred. Bowers had problems with the navy officers until both the demands on ships eased and he settled more comfortably in diplomatic exile on the French coast. However, the possibility that reporters would be inspired to question the actions of Bowers for political reasons should not be discounted. Roosevelt appointed Bowers to Spain in the light of his significant contributions to the Democratic Party. The outbreak of war came during the bitter 1936 election campaign,



PROGRESS OF THE SPANISH CIVIL WAR

There was another lull in the fighting yesterday. Oviedo (1) was reported captured by a rebel ruse. The coast at (2) was comparatively quiet. Foreigners were evacuated. An aviation aide from Paris visited Ambassador Bowers and found he needed no help. At (3) the rebels had halted their drive toward Madrid. Fighting at Saragossa (4) continued. By the capture of Albacete (5) the government took full control of Southeast Spain. The Leftist attack on Cordoba (6) continued. The battleship Jaime I was crippled by forts at Ceuta (7).

Map of Spain showing the progress of the Spanish Civil War from the *New York Times* of 25 July 1936.

and the perceived failures of a Democratic ambassador potentially provided ammunition for the Republican Party campaigners.

Navy–state department tensions were not isolated to dealings with Bowers. The consular officer in Barcelona, Hallet Johnson, essentially desired to have a ship tasked solely for his support. This demand required mediation in Washington, with Captain Amsden, commanding officer of *Quincy*, given the authority to act as he believed most fit.[34]

Such demands and disagreements over the locations of navy ships intermittently arose throughout the conflict. In December 1936, rumors spread that the Nationalists planned a surprise attack on Barcelona, and Johnson again sought to have guaranteed naval support nearby. This was the response:

> State Department requested two ships be retained at nearby French ports. . . . [the] Squadron Commander was embarrassed by State Department's request . . . [and] therefore decided to visit Barcelona and ascertain what emergency, if any obtained. . . . The city appeared quiet and proceeding with normal business.[35]

Communications proved difficult during the conflict, with both sides cutting telegraph and telephone lines, and otherwise interfering with communications. Navy ships, with their radio suites, provided communications that might not otherwise have existed. Ambassador Bowers's drive to have a ship constantly stationed near him derived, in large part, from this. He desired to maintain contact with all of the consular officials in Spain and with Washington—a navy ship could do so far better than the French telephone system in St. Jean de Luz.

The absence of a common communications system also exacerbated whatever other tensions might have existed. Captain Amsden had one strong recommendation for equipping *Raleigh* prior to her sailing—that she be "furnished with consular code book prior to sailing."[36] This deficiency was not corrected until mid-October, when an officer from *Raleigh* traveled to Paris to courier a copy of the code book.

For the two organizations, the Spanish Civil War occurred during a period of transition. Slowly, but surely, modern communications were eroding the traditional freedoms that both state department and navy personnel had enjoyed on their distant stations. This change was noted in other circumstances:

> The cable spoiled the Asiatic squadron. Before it was laid, one really was somebody out there but afterwards one simply became a damned errand boy at the end of a telegraph wire.[37]

Tensions did not derive solely from personal disagreements or incompetence, but also from differing institutional priorities and needs. State department officials desired, in general, to maintain their offices and keep doing their jobs in Spain until the very last minute. In a war, this often meant assuming a risk that they would need to flee at a moment's notice—U.S. Navy ships provided the most assured means of doing so safely. The navy, on the other hand, would have much preferred more extended warning before demands for ship movements to ease scheduling of maintenance and port visits. While both organizations preferred that all Americans leave Spain as soon as possible, for the navy that included the state department personnel. In essence, both sides wanted the other organization to make their difficult life amidst the civil war a little bit easier.

During the Spanish Civil War, perhaps for the first time, Washington officials attempted to manage operations not only on a day-to-day, but sometimes even on an hour-to-hour basis. Of all the nations involved in evacuations, the United States maintained the tightest restrictions on evacuating Spanish citizens. Thus, when *Kane* entered Santander in July 1937, the following determination was made:

> it became apparent that there would be several cases which must be referred to the Department for approval and therefore, three pm was the time set for leaving the beach in order that despatches might be sent to the Department prior to the close of working hours in Washington.

On an almost hourly basis, messages went back and forth between the ship and Washington discussing cases of individual Spaniards. Three were denied boarding rights since "such action would be contrary to our established policy." The consul onboard *Kane,* appealed this decision in one case.

> Reply . . . concerning evacuation of Spanish nationals does not mention cook of Consular household. Request ruling this case. . . . cooks extremely difficult to find . . . this one well taught by Mrs. Chapman . . . her evacuation could not set a troublesome precedent.

Hull responded by radio that the "evacuation of the cook approved subject of course permission of local authorities."[38] This case provides an amusing example of a situation that repeatedly occurred throughout the operations in Spanish waters.

Within a whirlwind of diplomatic and legislative (in)activity, protecting American lives and property in Spain provided the dominant element of the U.S. response to the conflict. The United States remained most concerned with avoiding involvement in a conflict while concurrently seeking to protect threatened interests. All too often, such events have led to U.S. Navy forces operating amid other nations' wars.

As often occurs, personal and bureaucratic tensions and rivalries sparked disputes that reached back to Washington for resolution. The growing sophistication of modern communications systems encouraged such appeals. The navy department retained the traditional desire to allow ship's captains total independence, but, increasingly, the communication capabilities tempted those in Washington to micromanage the situation in Spanish waters. Thus, both state department and navy officials used message traffic and the telephone to attempt to direct actions during evacuation operations, thereby even further exacerbating tensions that already existed.

A desire to minimize risks to American citizens and U.S. Navy ships partially drove the attempts to control actions directly from Washington. For example, the strict controls on evacuation of Spanish nationals represented a desire to avoid compromising the United States' standing as a neutral party. Thus, restricting evacuations solely to foreigners (and only those foreigners for whom the local administrators authorized departure) provided one means to decrease the possibility of attacks against U.S. warships or interests.[39] Squadron 40-T's story might read in a much different way if the bombs had not missed *Kane* in August 1936.

Despite America's isolationism in the 1930s, it remained entangled in world affairs. When the Spanish Civil War broke out, the president ordered the navy to rescue stranded Americans and to support state department officials. Despite interdepartmental tensions that manifested themselves amidst the Spanish Civil War, one cannot escape the reality that U.S. naval forces operated for four years in the middle of a war and safely evacuated over fifteen hundred people.

Table

American Evacuations from Spain

Ships	Date	City	Number of Evacuees	Number of American	Source
SS *Exeter*	24 July 1936	Barcelona	164	60	NYT, 25 Jul 36, p. 1
BB-37 *Oklahoma*	24 July 1936	Bilbao	29	15	Nat Archives, RG 38
Oklahoma	25 July 1936	Santander	10	7	Nat Archives, RG 38
Oklahoma	25–31 July 1936	Bibao	82	4	Nat Archives, RG 38
Cayuga	26 July 1936	San Sebastian	61	14	Nat Archives, RG 38
Cayuga	27 July 1936	Fuentarrabia	2	2	Nat Archives, RG 38
CA-39 *Quincy*	27 July 1936	Motil	3	2	Nat Archives, RG 38
Quincy	30 July 1936	Palma	10	10	Nat Archives, RG 38
Quincy	31 July 1936	Valencia	92	0	Nat Archives, RG 38
Quincy	1 August 1936	Valencia	57	41	Nat Archives, RG 38
Cayuga	1 August 1936	Vigo	12	3	*Cayuga* logbook
Oklahoma	7 August 1936	Bilbao	26	10	Nat Archives, RG 38
Cayuga	12 August 1936	Bilbao	26	13	*Cayuga* logbook
Oklahoma	14 August 1936	Cadiz	18	18	Nat Archives, RG 38
Quincy	14 August 1936	Palma	28	28	Nat Archives, RG 38
Quincy	15 August 1936	Iviza	10	9	Nat Archives, RG 38
Quincy	16 August 1936	Alicante	42	34	Nat Archives, RG 38
Cayuga	17 August 1936	Ferral	1	1	*Cayuga* logbook
Oklahoma	19 August 1936	Malaga	17	3	Nat Archives, RG 38
Oklahoma	20 August 1936	Palma, Majorca	23	2	Nat Archives, RG 38
Quincy	20 August 1936	Palma	3	2	Nat Archives, RG 38
Oklahoma	21 August 1936	Barcelona	6	4	Nat Archives, RG 38
Cayuga	21 August 1936		56	6	*Cayuga* logbook
Quincy	25 August 1936	Valencia	9	4	Nat Archives, RG 38
Quincy	26 August 1936	Alicante	21	16	Nat Archives, RG 38
Oklahoma	26 August 1936	Malaga	26	0	Nat Archives, RG 38
Oklahoma	27 August 1936	Palma	4	0	DOSPR, v15, p191
Cayuga	30 August 1936	Bilbao	52	27	*Cayuga* logbook
DD-231 *Hatfield*	3 September 1936	Alicante	22	15	Nat Archives, RG 38
Hatfield	18 September 1936	Malaga	2	2	DOSPR, v15, p244
Quincy	19 September 1936	Alicante	75	51	DOSPR, v15, p244

Ships	Date	City	Number of Evacuees	Number of American	Source
Hatfield	20 September 1936	Malaga	4	1	DOSPR, v15, p243
DD-235 *Kane*	8 October 1936	Santander	46	18	Sq40-T A8/(34)
Hatfield	1 October 1936	Valencia	6	2	DOSPR, v15, p282
Hatfield	28 October 1936	Barcelona	6	2	Sq40-T A8/(71)
CL-7 *Raleigh*	3 November 1936	Valencia	24	18	Sq40-T calendar
Raleigh	22 November 1936	Barcelona	18		Sq40-T calendar
Raleigh	27 November 1936	Valencia	57	44	Sq40-T calendar
Hatfield	28 November 1936	Barcelona	18		Sq40-T calendar
Raleigh	14 December 1936	Valencia	27	9	Sq40-T calendar
Raleigh	15 December 1936	Barcelona	8	1	Sq40-T calendar
Raleigh	16 December 1936	Palma	1	1	Sq40-T calendar
PG-50 *Erie*	17 December 1936	Gijon, Bilboa	7	2	Sq40-T calendar
Erie	18 December 1936	Santander	4	3	*Erie* log book
Kane	23 December 1936	Valencia	1	1	Sq40-T calendar
Raleigh	18 January 1937	Valencia	1	1	Sq40-T calendar
Kane	26 February 1937	Valencia	10	7	Sq40-T A8/(208)
Raleigh	14 May 1937	Alicante	156	1	Sq40-T A8/(360)
Kane	10 July 1937	Santander	60	58	DOSPR, v17, p26,31
Kane	17 August 1937	Santander	18	11	DOSPR, v17, p143
Kane	10 July 1937	Gijon	75	32	DOSPR, v17, p192
DD-126 *Badger*	25 January 1939	Barcelona	20	18	DOSPR, v20, p57-8
Evacuee Totals:		Total:	1,556		
		U.S. Citizens:		633	

Sources:

DOSPR	Department of State press releases
NYT	*New York Times*
Sq40-T	Squadron 40-T weekly reports, numbered consecutively. WWII Command File: Box 293: Special Forces, Squadron 40-T; Naval Operational Archives, Naval Historical Center, Washington, D.C.
Nat Archives, RG 38	From files in Records of the Office of the Chief of Naval Operations, Record Group 38, National Archives, Washington, D.C.

NOTES

1. Claude G. Bowers, *My Mission to Spain: Watching the Rehearsal for World War II* (New York: Simon and Schuster, 1954). For more information on Bowers, see: Peter J. Sehlinger and Holman Hamilton, *Spokesman for Democracy: Claude G. Bowers, 1878–1958* (Indianapolis: Indiana Historical Society, 2000); and Mary Josephine Hrenchir, *Claude G. Bowers and American Foreign Relations* (Ph.D. diss., University of Nebraska, 1993).

2. *New York Times,* 15, 17, 18 July 1936; Willard C. Frank, *Sea Power, Politics, and the Onset of the Spanish War, 1936* (Ph.D. diss., University of Pittsburgh, 1969), 237–38; Arthur Marder, "The Royal Navy and the Ethiopian Crisis of 1935–36," *American Historical Review* 75 (1970): 1327–56. On 20 July, the Royal Air Force (RAF) canceled orders for RAF aircraft to leave Gibraltar for England on the "possibility that RAF pilots may fly to the aid of their British compatriots stranded in Spain" (*New York Times,* 21 July 1936). By 24 July, Britain, France, Germany, and Italy already had 38 warships en route to or involved in rescue efforts (*New York Times,* 25 July 1936). By the end of 1936, at least nine nations had sent ships to Spain for evacuations, including Argentina, Mexico, Portugal, and Yugoslavia.

3. *New York Times,* 22 July 1936. *Oklahoma* received her orders eighteen hours after they were sent (or at least dated). Thus, *Oklahoma* did not receive the orders to go to Spain until 22 July and did not sail from Cherbourg for Bilbao until the afternoon of 23 July 1936. National Archives, Washington, D.C., records of the Office of the Chief of Naval Operations, Record Group 38 (hereafter: RG38), box no. 9, Squadron 40-T Reports & Dispatches to OPNAV: BB37/A16-3(635). From CO USS *Oklahoma* to the Chief of Naval Operations, "U.S.S. *Oklahoma*—Report in connection with revolution in Spain," 26 August 1936, 1.

4. *New York Times,* 23 July 1936.

5. Consul at Barcelona to the secretary of state, message 25 July 1936, FRUS, 1936 II: 643; *New York Times,* 24 July 1936; Cordell Hull, *The Memoirs of Cordell Hull* (New York: Macmillan, 1948), 475–76; and FRUS, II (1936): 635–36, 638–39. Hull stated that he believed that *Oklahoma, Cayuga, Exeter,* and *Quincy* would be sufficient to evacuate all Americans who desired to leave the danger points. In addition, he commented that French ships were prepared to take Americans aboard (*New York Times,* 25 July 1936). Also, by this time, Italian merchant and British Royal Navy ships had evacuated Americans from Spain. The president later suggested that the other two battleships "could be properly used in Spanish waters even if midshipmen schedule is delayed a week or two" (President to SecNav SecState, 0024 1246 TOR, in code room 1455, 24 July 1936, phoned to SecNav 1505, to SecState 1510, RG 38, box 2, Dispatches & Reports on Ship Movements, 1936–37).

6. *New York Times,* 24 July 1936; Commander, Cadet Practice Squadron to the Commandant, "*Cayuga*—Duty in connection with revolt in Spain, 24–30 July 1936," 615-8/4/36, RG38, box 2, Dispatches & Reports on Ship Movements, 1936–37.

7. Ambassador Claude G. Bowers diary, Manuscript II (MSS II), 25 July 1936. Bowers noted in his diary that he was amused when, after several days of unsuccessful attempts, a state department official got through to him on the telephone and "kept repeating, as though unwilling to trust his ears: 'Are you sure you are all right?' It was though he thought me a prisoner talking in the presence of my jailer with a gun in his back." This entry is identical to the phrases used in his book recounting his period in Spain. Bowers was a prolific writer, with many books published prior to his ambassadorship. Clearly, he intended to turn his diary into a book from the beginning; thus, there are many similarities between the two. In this case, he fleshed out the diary account in the book, using press accounts questioning his whereabouts to heighten the ab-

surdity of the situation from his point of view (Bowers, *My Mission to Spain*, 249–50). Bowers found the situation so "serene at San Sebastian . . . [that] later [he] went to the cinema at Irun to see the Louis-Schmelling fight pictures" (Bowers, MSS II, 18 July 1936).

8. The situation of the U.S. embassy in Madrid provides a good example of this. Throughout the fall, until the state department finally ordered the embassy evacuated on 23 November 1936 (FRUS, 1936, II, 773). U.S. Navy ships were occasionally alerted to move to Valencia or Alicante to prepare to pick up those evacuating the embassy. The initial movements of foreigners from Madrid proved difficult to negotiate, thus planned evacuations were canceled or postponed several times. For example, during the morning of 7 November 1936, Rear Admiral Fairfield, Squadron 40-T's commander, received an urgent request for the movement of a ship to Valencia for evacuating the embassy. Thus, Fairfield ordered *Hatfield* and directed *Raleigh* to prepare to steam. In the afternoon, a message "was received to the effect that a ship was not needed as far as Embassy was concerned since no evacuation of refugees from Madrid was expected. . . . Accordingly, orders putting *Raleigh* on short notice were canceled" (Squadron 40-T report of operations, a8/[111], 7 November 1936, 6).

9. United States Department of the Navy, Annual Report of the Secretary of the Navy for the Fiscal Year 1937 (Washington, D.C., 1937), 9; and Frank, *Sea Power*, 277.

10. On 19 September, Adm. R. R. Waesche sent the following message: "1. Headquarters strongly disapproves the action of the Commanding Officer of the *Cayuga* in requesting the *George W. Campbell* be assigned to relieve the *Cayuga*, reference (a)." U.S. Coast Guard General Correspondence, 1910–41, Correspondence, 1936–41, 601, Scope of Operations Carrabasset to Cedar, box no. 458, entry 283B, file: *Cayuga*; RG 26, records of the U.S. Coast Guard, National Archives (hereafter: RG26). See also: Robert Erwin Johnson, *Guardians of the Sea* (Annapolis: Naval Institute Press, 1987), 171. "*Cayuga* has requested information duration present duty. Under present conditions it appears she could be spared." CNO to *Raleigh*, 3823 1340, 23 September 1936, RG38, box 2, Dispatches & Reports on Ship Movements, 1936–37. On navy ships and 40-T, for example, the "Squadron Commander . . . indoctrinated *Drayton* for possible emergency duty with Squadron 40-T while in Mediterranean waters, but otherwise hopes that her shakedown cruise may continue without interruption" (A8/(111), 7 Nov. 1936, 40-T Naval Archives).

11. Approximately fifty thousand of the estimated one hundred thousand foreigners in Spain and ten thousand Spaniards were evacuated by sea by the end of 1936. The Royal Navy evacuated at least fifteen thousand; the French and German navies handled almost that number; the Italians transported about nine thousand; U.S. ships took fifteen hundred; and other nations (such as the Portuguese and Argentineans) removed about two thousand (Frank, *Sea Power, Politics*, 300).

12. See correspondence in RG38, box 10, Squadron 40-T, Records A6-2 to P9 (Evacuation of U.S. Citizens).

13. See, for example, DOS *Bulletin* 2:28–53: 473, 542–43, 560, 611, 624, 645–46, 706; and Johnson, *Guardians*, 178–79. Of these, the only clear case of Squadron 40-T involvement in these evacuations came on 9 June 1940 when the destroyer *Dickerson* transported five Americans from Casablanca, Morocco, to meet a merchant ship at Lisbon, Portugal, for transport to the United States (page 645).

14. LCDR Joseph F. Bouchard, USN, "Accidents and Crises: *Panay, Liberty,* and *Stark,*" *Naval War College Review* 61 (1988): 87–102.

15. Bowers, MSS II, 30 July 1936.

16. This occurred on 24 July 1936 in San Sebastian Harbor (Commander, Cadet Practice Squadron, aboard USS *Wyoming,* to the Commandant, USCG, Report, 4 August 1936, RG 26). A year later, when *Kane* entered Santander with the Nationalists approaching, the following precautions were taken with the two motor whaleboats that had to go six miles from the ship to shore:

> [They] always made the trip together. Besides the boats' flags, a boat ensign was stretched horizontally over the hood of the gig. One rifle and two Colt automatics with ammunition were carried in each boat. These were kept covered but within easy reach.

Squadron 40-T report of operations A8/(476), 18 July 1937, General Records of the Department of the Navy, Record Group 80: "Annual Reports of Fleets and Task Forces of the U.S. Navy, 1920–1941," roll 15, M-971.

17. The conflict's effect on shipping lies outside the scope of this article. For a (mostly accurate) listing of attacks on foreign ships, see: Norman J. Padelford, *International Law and Diplomacy in the Spanish Civil Strife* (New York: Macmillan, 1939), 663–74. See pages 25 to 52 for a discussion of these attacks from a legal perspective. For a more extensive list for the period between July and September of 1936, see Frank, *Sea Power, Politics,* 519–22. *Exmouth*'s "master . . . reported that Spanish planes . . . dropped three bombs which exploded 100 yards from his ship" (Department of State Press Releases [hereafter, DOSPR], vol. 15, 1936 [24 July 1936], 84). This case is an example where Padelford is "mostly accurate." He lists (page 668) the attack as 24 July (the date of the press release) rather than 22 July (the date of the reported attack). The Nationalist ships prevented *Nantucket Chief* from contacting U.S. Navy ships by holding down the key, thus cutting off radio communications (Squadron 40-T report of operations, A8/(152), 26 February 1938). See also, A8/(88), 29 January 1938, National Archives microfilmed records.

18. CO *Oklahoma* to the Chief of Naval Operations, BB37/A16-3(635), message, 26 August 1936, box 1, ONI Briefs & Correspondence, On Non-Intervention, 1936–37, RG 38, National Archives; Bowers, MSS II, 1 August 1936; and CDD21/14-3/A8/(124), 12 July 1937, National Archives microfilmed records.

19. *Cayuga* logbook entry, 8 August 1936, RG 26, records of the United States Coast Guard, records of the Revenue Cutter Service, logs of Revenue Cutters and Coast Guard Vessels, 1819–1941, *Cayuga*, November 1935–December 1936, Box 601, NC-31 Entry 159A. A closer call came later in the fall when a Nationalist bomber attacked Palma when *Oklahoma* was in the port picking up evacuees.

20. Entry for 30 August 1936, Log Book USS *Kane,* 1 January 1936–31 December 1936, LLL-16, U.S. Department of the Navy logbooks, U.S. Naval Vessels, Record Group 24, National Archives, Washington, D.C. For the U.S. protest and the responses from the two sides in Spain, see DOSPR, 1936, 15: 201–3, 225–26.

21. For a discussion of the implications of this attack for the Non-Intervention Committee, see: J. Bowyer Bell, *The Non-Intervention Committee and the Spanish Civil War* (Ph.D. diss., Duke University, 1958), 183–87. For discussions of the events leading to the Nyon Conference and the multinational antisubmarine patrols that resulted from it, see Peter Gretton, "The Nyon Conference: The Naval Aspect," *English Historical Review* 40 (1975): 103–12; James W. Cortada, "Ships, Diplomacy, and the Spanish Civil War: Nyon Conference, September, 1937," *Il Politico* 37 (1972): 673–89; and William C. Mills, "The Nyon Conference: Neville Chamberlain, Anthony Eden, and the Appeasement of Italy in 1937," *International History Review* 15 (1993): 1–22.

22. For discussions of the war at sea, see: Willard C. Frank, "Naval Operations in the Spanish Civil War," *Naval War College Review* 37 (1984): 33–37; C. V. Usborne, "The Influence of Sea Power on the Fighting in Spain," *Journal of the Royal United Services Institute* (JRUSI) 83 (1939): 529; William H. Davis, "The Naval Side of the Spanish Civil War," USNI *Proceedings* 66 (1940): 803–23; and Squadron 40-T report of operations, A8/(112), 21 February 1937, 4, Naval Archives 40-T reports.

23. FRUS, 1936, II: 705–6.

24. For a discussion of German activity, see Willard C. Frank Jr., "German Clandestine Submarine Warfare in the Spanish Civil War, 1936" in *New Interpretations in Naval History,* William R. Roberts and Jack Sweetman, eds. (Annapolis: Naval Institute Press, 1991), 107–23; Willard C. Frank Jr., "Politico-Military Deception at Sea in the Spanish Civil War, 1936–39," *Intelligence and National Security* 5 (1990): 84–112; and Stephen William Tanner, *German Naval Intervention in the Spanish Civil War as Reflected by the German Records, 1936–1939* (Ph.D. diss., American University, 1976). For discussions of multinational naval cooperation, see Adam B. Siegel, "Naval Cooperation in a Multipolar War: The Spanish Civil War," in *Tidskrift I Sjöväsendet* (*Journal of the Royal Swedish Academy of Naval Science,* 2001), 377–98; and Willard C. Frank Jr., "Multinational Naval Cooperation in the Spanish Civil War," *Naval War College Review* 47 (1994): 72–101.

25. *Cayuga* logbook entry, 24 July 1936, RG26, National Archives. Consul Hallet Johnson sent a message through a French warship on 23 July 1936 from San Sebastian noting that "Situation here dangerous. . . . The British

Ambassador is trying to send a message asking for a warship and I recommend that an American vessel be sent here immediately if possible" (Department of State Press Release, 23 July 1936).

26. Commanding Officer of *Quincy,* "Report of Activities in Connection with Revolution in Spain, 12 August 1936," CA39/A8/A16-2/P9, RG38, ONI. Despite a rather extensive literature on the development of Anglo-American naval relations leading up to World War II, there is essentially no discussion of the role that interaction during the Spanish Civil War might have played in improving relations between the two navies. A rare exception is recorded in this report:

> As another means of furthering Anglo-American cooperation the admiralty, in July [1937], suggested that the U.S. squadron in the Mediterranean be offered the use of naval and dockyard facilities in Malta and Gibraltar during the prevailing situation in Europe. No prior notification for such use would be necessary. In September, however, the admiralty decided the offer need not be considered for "normal" times. The U.S. squadron was to be withdrawn as soon as the situation in Spain permitted.

(Ritchie Ovendale, *"Appeasement" and the English Speaking World* [Cardiff: University of Wales Press, 1975], 19.) Ovendale fails to note, however, that U.S. Navy ships had such access to Gibraltar from the very start of the civil war with at least two ships using Gibraltar's drydocking facilities before the end of 1936 (*Raleigh* and *Hatfield,* Squadron 40-T calendar). Almost all researchers focus on activities in the Far East, virtually all of which fall after the start of cooperation off Spain. See, for example, Malcolm M. Murfett, *Foolproof Relations: The Search for Anglo-American Naval Cooperation during the Chamberlain Years, 1937–1940* (Singapore, 1984); James R. Leutze, *Bargaining for Supremacy: Anglo-American Naval Collaboration, 1937–41* (Chapel Hill: University of North Carolina Press, 1977); and David Reynolds, *The Creation of the Anglo-American Alliance, 1937–41: A Study in Competitive Cooperation* (Chapel Hill: University of North Carolina Press, 1982). For discussions of some attempts by Roosevelt to prompt Anglo-American military cooperation, see: Richard A. Harrison, "A Presidential Démarche: Franklin D. Roosevelt's Personal Diplomacy and Great Britain, 1936–1937," *Diplomatic History* 5 (1981): 245–72; and Richard A. Harrison, "Testing the Water: A Secret Probe toward Anglo-American Military Cooperation in 1936," *International History Review* 7 (1985): 214–34.

27. For published examples, see comments by Captain William Faulkner Amsden, Commanding Officer, USS *Quincy,* 1 August 1936, in DOSPR, vol. 15 (10 September 1936), 227–29; and comments by Mahlon F. Perkins, American Consul General in Barcelona, 22 September 1936, James W. Cortada, ed., *A City in War: American Views on Barcelona and the Spanish Civil War* (Wilmington, Del.: Scholarly Resources, 1985), 26–27.

28. Bowers, MSS II, 30 July 36; and Bowers, *Mission,* 261–63.

29. Hull to Bowers, telegram, 3 August 1936, records of the Office of the Chief of Naval Operations, Record Group 38, Office of Naval Intelligence, West European Section (Op 16-B-12, Op 16-F-3), Foreign Intelligence Branch, Record on Spanish Civil War, 1936–39, National Archives, Washington, D.C. (hereafter, RG38, ONI), box 2.

30. Bowers to Hull, 3 August 1936, 8002 0035, personal communication via *Cayuga*, RG38, ONI, box 2; Bowers to Hull, telegram, 27 July 1936, FRUS, 1936, vol. II: 648; CO *Oklahoma* to the Chief of Naval Operations, message, 26 August 1936, BB37/A16-3(635), box 1, ONI Briefs & Correspondence, On Non-Intervention, 1936–37, RG 38, ONI; Hull to Bowers on *Cayuga*, 1904–1925, 4 August 1936, RUSH, RG 38, ONI, box 2; and *Cayuga* (Bowers) to STATE DEPT WASHN 8005, 5 August 1936, RG 38, ONI, box 2.

31. Bowers, in reference to "a tough looking citizen representing the *Chicago Daily News,* owned by Frank Knox, the Republican candidate for Vice President, [who] has been in Madrid threatening to vilify me for not being in Madrid" (Bowers, MSS II, 14 August 1936).

32. Amb. Bowers to State Department, USCG *Cayuga* Dispatch of 8013–2023 of August, box 1, ONI Briefs & Correspondence, On Non-Intervention, 1936–37, RG 38, ONI; USCG *Cayuga* to USS *Oklahoma,* dispatch 6013–2223 of August, box 1, ONI, Briefs &

Correspondence, On Non-Intervention, 1936–37, RG 38, ONI. Bowers simply noted that "I have wired Washington for two more ships for northern coast" (Bowers, MSS II, 13 August 1936). Bowers does not discuss this issue elsewhere in his diary or book (USS *Oklahoma* USCG *Cayuga,* dispatch, 1014-0815 August, and CO *Oklahoma* to the Chief of Naval Operations, message, BB37/A16-3[635], 26 August 1936, box 1, ONI Briefs & Correspondence. On Non-Intervention, 1936–37, RG 38, National Archives).

33. Bowers, MSS II, 20 August 1936.

34. See 25–26 July exchange of telegrams, FRUS, 1936, vol. II, 643.

35. Squadron 40-T calendar entries for 2–4 December 1936, Naval Operational Archives, Naval Historical Center, Building 57, Washington Navy Yard, Washington, D.C.: WWII Command File, box 293, Special Forces—Squadron 40-T (hereafter, 40-T calendar).

36. *Quincy* to OPNAV, 0018 1805 17 September 1936; and RG 38, box 2.

37. Rear Adm. C. F. Goodrich, USN, as quoted in William N. Still Jr., *American Sea Power in the Old World* (Westport, Conn.: Greenwood Press, 1980), 13.

38. CDD21/14-3/A8/(124), 12 July 1937, National Archives microfilmed records.

39. The first case of an American captured during the fighting involved a pilot captured by Loyalist forces after being shot down. The state department intervened on his behalf, the government eventually released him, and a navy ship evacuated him from Spain. Squadron 40-T reported that "The evening before the Government left Madrid for Valencia, Patriarca [the American pilot working for Rebels] was turned over to the Embassy Officials, where he remained until the Embassy was evacuated. He passed safely through the customs at Valencia, where his name was not known, or at least not recognized, and embarked in *Raleigh*" (Squadron 40-T report of operations, A8/(139), 29 November 1936, in Naval Operational Archives, Naval Historical Center, Building 57, Washington Navy Yard, Washington, D.C.: WWII Command File, box 293, Special Forces, Squadron 40-T).

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HUMAN FRICTION IN THE BRITISH NAVAL OPERATIONAL INTELLIGENCE LINKAGES:

BLETCHLEY PARK–PORTSMOUTH COMMAND, 1942–44

by C. I. Hamilton

> Everything in war is very simple, but the simplest thing is difficult. . . . Friction, as we choose to call it, is the force that makes the apparently easy so difficult.
>
> Carl von Clausewitz, *On War.*[1]

It is now notorious that the Western allies in World War II came to be provided with almost an embarrassment of prior intelligence about enemy plans, dispositions, and movements, to the degree that the casual inquirer might wonder how the Axis held out for so long. A definitive answer would have to deal with a number of basic factors, above all concerning production, technology, diplomacy, geography, logistics, and supply, before turning to look at the effectiveness (or otherwise) of the military strategists; and there would still remain a detailed consideration of tactics, indoctrination, training, and the quality of armaments. The list is not complete, and another relevant factor serves as the general theme of this paper: how human friction, the "grit in the organization," as it were, could itself impede the exploitation of intelligence.

The focus here will be on the development of the enormous allied naval effort to invade France—Operation Neptune, the naval side of Overlord—and with particular reference to what was called "operational intelligence." The latter was defined thus by Admiral John Godfrey, the director of naval intelligence (DNI) between 1939 and 1942:

> "Operational Intelligence" is the name given to the moment-to-moment intelligence needed for the conduct of operations, anti submarine measures, convoys, and naval occasions of all sorts. It is the "hot news," as distinct from static long distance intelligence.[2]

It would be difficult to overemphasize how important this operational intelligence was to the allied planners of Neptune. The material balance in ground

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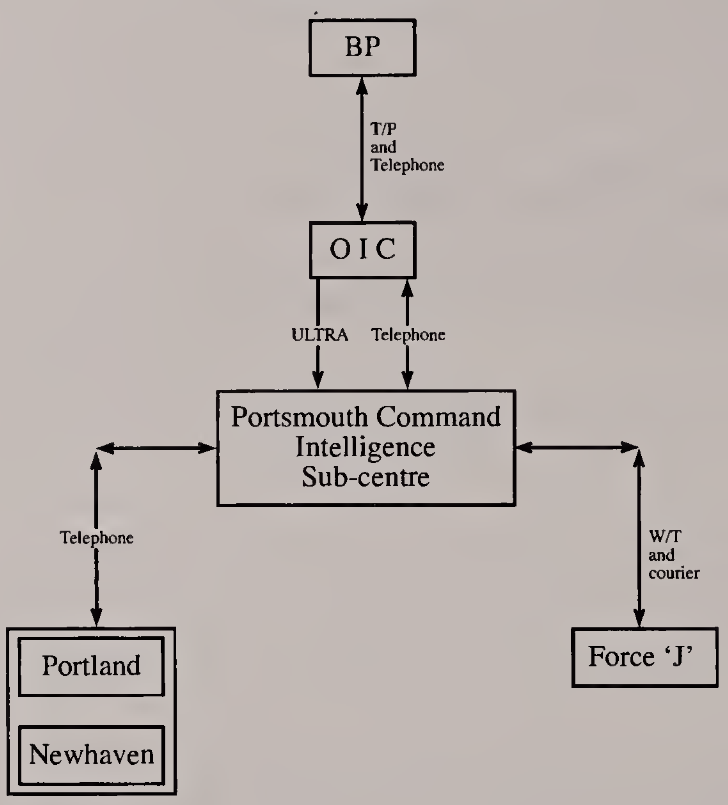


Operational Intelligence Links
Spring 1943

forces between the invaders and the defenders was too fine for the allies to be complacent; to be confident of success, they needed the best intelligence they could get about the enemy. Here, they were fortunate. Nevertheless, problems remained, and some can be identified in the operational intelligence linkages between the code breakers, the Admiralty, and the Portsmouth command.

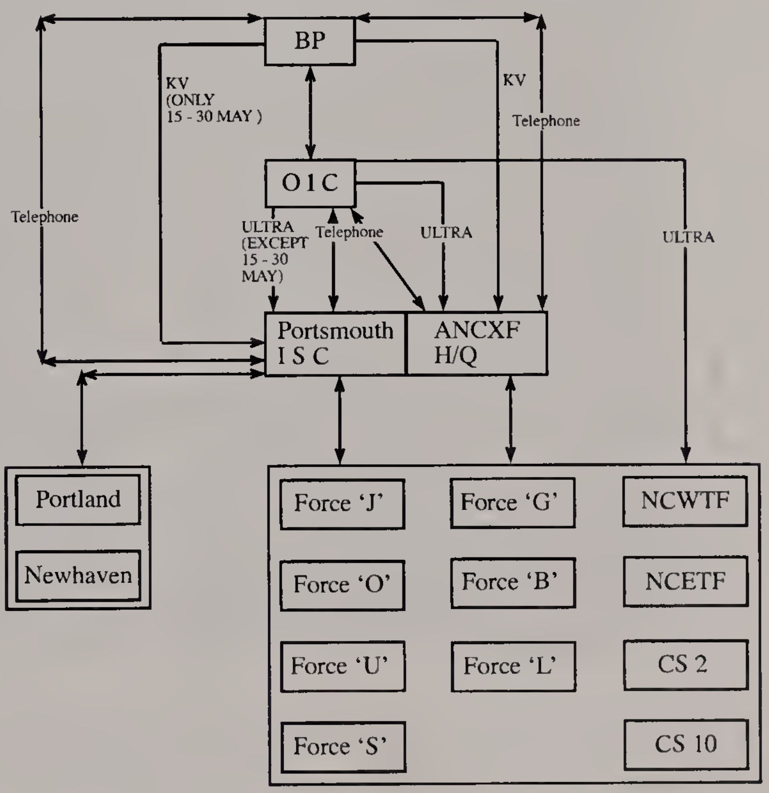
To avoid unduly congesting them, the two figures (1 and 2) showing those linkages at different periods have been simplified. In particular, the second one omits the hand message system that carried information between authorized personnel throughout the Portsmouth command. Another significant omission is that there is no reference to the contraction of the Portsmouth command to the east, from 28 May 1944, which brought Newhaven within the Dover command operational area. Nevertheless, these figures serve to illustrate the subject of this essay, including showing the expansion that came during the buildup to Neptune.

The first figure shows the linkages in late 1942 and early 1943 from Bletchley Park (BP) down to the Operational Intelligence Centre (OIC) at the Admiralty, then further to the Portsmouth naval intelligence subcenter, part of the operational complex tunneled in the chalk below the nineteenth-century Fort Southwick (somewhat to the north of the dockyard), and finally to the subordinate Portsmouth commands of Portland and Newhaven, plus Force J (based on the Isle of Wight), a model for the naval assault forces of Operation Neptune. The linkages were largely two-way, along which—*inter alia*—intelligence gathered by aircraft or ships at sea—and reports on engagements—would be passed back by the commands to the Admiralty and even to BP. Inevitably, though, this diagram will remind one of the signals intelligence flowing in the other direction, what at the time was commonly called "Special Intelligence" or just "Special." Decrypts of German signals, plus various appreciations and reports, would be sent from BP to the OIC. There they would be collated with other sources, notably photographic reconnaissance and wireless direction finding. The crucial intelligence would then be sent to "indoctrinated" officers through Ultra signals, though regularly elaborated on in the case of the home commands through the scrambler telephone. The immediate recipient at Portsmouth was the staff officer (intelligence) (SO[I]), head of the subcenter. He would pass on the precious intelligence by word of mouth to the senior operations officers on the staff of the Portsmouth commander-in-chief, but he was also responsible—with the approval of the Portsmouth chief of staff—for passing on information to the SO(I) Force J and to the intelligence officers at Portland and Newhaven. These officers received intelligence on a need-to-know basis, but still in a form that showed it was based on decrypts.[3] That, however, was the last stage at which those origins were clear. They were disguised when intelligence was passed further down the line to, for example, the officers commanding coastal forces.[4]

Figure 1 shows a relatively circumscribed circuit for "Special Intelligence." In that respect, Portsmouth was then typical of one of the southern home commands. A look at the equivalent figure for May and June 1944 reveals various new developments since the previous year. One is the KV service from BP. Another is the establishment down at Portsmouth of the headquarters of Admiral Sir Bertram Ramsay, the Allied Naval Commander, Expeditionary Force (ANCXF); Southwick House—not far from the fort—had been taken over for the purpose, the staff having moved there in late April 1944. Furthermore, there was a proliferation in the number of channel naval forces receiving "Special Intelligence." All of their commanding officers, each with his SO(I), were not only receiving signals (and intelligence) from Fort Southwick and Southwick House, but were also sent Ultra signals from the Admiralty. There had been a remarkable extension in the intelligence circuit in and around the Portsmouth command. It is this rapid expansion—followed as it was by the severe test of the invasion of Normandy—that makes the linkages particularly interesting. One sees not just the consequence of the move from an essentially defensive posture to an offensive one, but also a degree of growth that was bound to create some difficulties, and it is no accident that my best examples of friction come from the later period. It must be understood that, in general, the naval intelligence for Neptune was very effective, but there was friction and in certain cases, as will be pointed out, of a dangerous type.

First, though, let us look at its less virulent form. One was the way that personal irritation could cause poor working relationships between individuals. Take the example of the offence sometimes caused by the SO(I) to ANCXF, Lt. Cdr. Justin Richardson, RNVR. For nearly a year before the move to Southwick House, Richardson had not only been part of an interservice intelligence staff at Norfolk House (St. James's Square, London), considering the numerous problems of the return to the continent, but he had also been the chief naval originator of ideas. For instance, he was responsible for pointing out what became known as the "Richardson Gap," a section of the north French coast—much of the Bay of the Seine—that was protected by only light guns. (The Germans were to install heavier guns covering the bay—where the landings did eventually take place—well before D-Day.)[5] If he was a talented officer, he also felt himself somewhat beleaguered, since at Norfolk House he was greatly outnumbered and outranked by his army opposite numbers. Richardson found the best way to swing the balance in his favor was to take the offensive in meetings and generally to be aggressive. As a noncareer officer, he felt free to adopt similar tactics in some of his dealings with the Admiralty, for instance making peremptory demands on OIC for intelligence. However, it seems that when he committed himself to paper the most offense was caused, and not always because of aggressiveness. In some of his memoranda and the light verse he contributed to *Punch,* he was prone to the heavy facetiousness of which the English seem fond—except, perhaps, senior officers who may well have found such humor misplaced when occurring in papers submitted to them.[6] On one occasion, provoked by the tendency of the chief of combined operations (CCO) Lord Louis Mountbatten to predict falsely that the Germans were about to start the widespread protection of French beaches with underwater obstacles, Richardson even included the following verse in a naval staff minute sheet:

Operational Intelligence Links
May - June 1944



How doth the busy C.C.O.
Invest each empty shore
With underwater obstacles
That were not there before![7]

On this occasion, there is no indication that umbrage was taken, but Richardson was still chastened; only ten days later, the Germans did start laying down such obstacles on a large scale. Henceforward, Richardson's verse was still found in the pages of *Punch,* but his habits were too pronounced for him to purge all the inappropriate levity in his prose and doubtless continued to raise hackles.

His predecessor, Commander H. J. Murphy, had also been liable to cause offence through being aggressive and making peremptory demands. It is possible, however, that there was more than friction caused by an unusual personality. Murphy was one of the limited number of RN officers who had been promoted from the lower deck (this had been in 1918), which suggests that his unfortunate manner might have had its roots in class antagonism of some form or another.[8] At this remove, we cannot be sure, but the example serves at least to indicate friction between groups rather than individuals. Unfortunately, the subject of class antagonism in British naval intelligence is not one where the official archives seem to be of much value. This is not so with regard to a different type of friction—that between the genders.

With the increasing strain on intelligence manpower as the war continued, recourse was had to womanpower—in the shape both of Wrens (members of the Women's Royal Naval Service) at the outports and female civilians at the Admiralty. In OIC itself, from January 1943, one small part became exclusively female, the subsubsection known as 8K. This is of particular significance since it dealt with the occupied coast from the Elbe to the Spanish frontier—including the Normandy beaches. The head was Dr. Margaret E. C. Stewart, an archaeology Ph.D. In her reminiscences written for the naval intelligence division (NID) in 1946, she noted that much valuable information was commonly passed in OIC through semicasual conversations among male personnel. She felt she had been excluded from these because she was a woman, with the result that she did not receive some information relevant to her own duties in time or even at all.[9] This would have been damaging, since OIC had only a small staff, and depended—above all in times of strain—on information passing easily and quickly in oral form among the various members. In 1997, I spoke of this to one of the men specifically mentioned by Stewart, Captain Frank Harrison, who said he was not at all conscious of having elbowed anyone out of any conversation; indeed, he was rather hurt at the suggestion. Perhaps, though, it is indicative that he did not remember Dr. Stewart at all, even though they worked together in the same room (with space to cram in fifteen workers) for about a year.[10] Furthermore, for much of that time, they were both heads of important subsubsections; Paymaster Lt. Cdr. Harrison (as he then was) was responsible for the Norwegian coast. Of course, such forgetfulness is hardly conclusive proof of sexism; Harrison was speaking some fifty years after the events. There is much room for speculation. There are some signs that, at least at this stage of Stewart's career, she more often withdrew into silence in the face of perceived opposition than she was later to do, and it appears that experience had taught her to expect prejudice from at least some male colleagues. When she first spoke over the telephone in early 1943 to the SO(I) Portsmouth as his OIC liaison, he met her with an assortment of abusive words, simply because of his shock at now receiving operational intelligence from a woman; only subsequently did he come to respect what she had to say.[11] Stewart likely came to anticipate that men would rebuff her if she treated them as equals, which would have discouraged her from repeating the experiment too often. Her distance from male society might have been at times due only to her own perception, but that perception had a foundation in the sexist standards of the day. Whatever the precise cause, her gender led to her exclusion from casual conversations among at least some of her male colleagues, and this obviously impaired her usefulness and, by extension, that of OIC.

Dr. Margaret E. C. Stewart (1907–87) during a 1931 archaeological dig in Scotland, when the then Miss Margaret Mitchell was a student under Professor Gordon Childe. Courtesy of the Royal Commission on the Ancient and Historical Monuments of Scotland.

Surely more important than friction because of gender was friction among separate organizations. We scarcely need Richardson's experience at Norfolk House to remind us that the different services were not always on good terms, and one finds evidence in the archives of some disagreements between them over intelligence matters. Also at Norfolk House for a time was the joint body that concentrated even more than Richardson did upon "static" intelligence, that is, information without immediate reference to current operations, but necessary for later planning: above all, it gathered details of German defensive capabilities in northern France. This body became known as the theatre intelligence section (TIS). Both army and navy were represented, though each maintained separate subsections rather than aiming to create a single homogeneous interservice body. The naval subsection fell under Lt. Cdr. W. O. Rees-Millington. He, like Richardson, tended to find himself outnumbered. By January 1944, he had a staff of eighteen (including civilians), but by then the army equivalent was over ten times the size, and he, too, was relatively junior. At forty-three (in early 1944), he was old for his rank, yet had to cooperate with those who were both senior to him and often considerably younger; for instance, there was allegedly one brigadier who was only twenty-six. The effect was to make Rees-Millington compensate in meetings by being aggressive. One important emollient was Cdr. G. E. Gonin, head of NID 1L (which dealt with intelligence concerning the invasion and liaison with the Free French, Dutch, and Belgians). Gonin exercised a general supervision over Rees-Millington's subsection. His natural tact was responsible for smoothing over many feathers ruffled by his naval colleagues at Norfolk House (he had been doing this even during Murphy's time). It is interesting to see that, in his own report on Overlord, it was not personalities that he blamed for the problems between army and navy, but rather the effect—in times of particular stress—of the different forms and approaches of army and naval intelligence. Doubtless, too, he meant that differences in expertise impeded communication. As Gonin put it, Rees-Millington was not so much the instigator of problems as the victim caught between the two services, "with tearing red-hot naval demands met by a blank non-possumus." The crises were overcome, though, and Gonin thought their initial seriousness was "due almost entirely to that state of overwork and nerves which occurs when men find themselves at the climax for which they have worked for years."[12]

Although there were disagreements, one could scarcely expect under these circumstances that there would not be any. In general, relations among the services at this level of intelligence planning were relatively smooth. As far as one can judge, intelligence cooperation was as good or even better when it came to actual operations.

One may say also, to look for a moment beyond the confines of the British armed forces, that cooperation among the main Western allies appears to have been very close over naval intelligence matters concerning Neptune. It is telling that the surviving memoranda testify to warm feelings on the part of NID officers for the USN intelligence officers sent over to work in the TIS or NID, something that ought to be explained not by the emotional response of some romantic contemporaries that "blood is thicker than water" but rather by common naval traditions and experience.[13]

It is an irony—one Richardson would have dealt with in his usual heavy fashion in either verse or prose—that there was more friction about operational intelligence within the one service, or along the main intelligence linkages, than there appears to have been between or among services, or perhaps even nations. One significant example is the differences within the naval staff, between OIC personnel and operations staff officers. There were complaints by the former at receiving insufficient feedback concerning the operational exploitation of signals intelligence. Moreover, communications between OIC and the operations division were at times inadequate, and the latter tended not to give sufficient respect to intelligence sources. For instance, in mid-1944, it worried prematurely about the Germans operating "Walter" fast submarines, in consequence approving unnecessary modifications to MTBs. Had OIC been properly heeded, the panic might have been avoided.[14] It is tempting to see here the kind of exaggerated self-confidence and desire for action on the part of many executive officers, encouraging insensitivity about intelligence matters upon which Beesly and others have commented.[15]

Less written about is the friction between OIC and the naval section (NS) at BP, on the organizational though not personal level. Dr. Stewart commented on this:

> There was more than a suspicion of professional jealousy. It was indeed almost a point of honour to find the answer from among our own records, even if a trifle incomplete, rather than have recourse to a B.P. telephone extension.[16]
>
> OIC felt that BP was somewhat imperialist, trying to take over OIC duties, and that this was dangerous since BP did not have the necessary "feel" for operations, however good it was at cryptanalysis. OICs fears were often sparked by appeals for more collateral intelligence from NS. The latter, on the other hand, felt that OIC simply did not understand the importance to cryptographers of context. One BP report noted "the old attitude" of "Why does B.P. want to know[?]," based on the consistent and widespread belief in O.I.C. that all N.S. had to do was to decode and leave the rest to Admiralty. The cryptographic and interpretative value of information on allied forces, movements and operations was never fully understood in Admiralty.[17]

The uneasiness of the cooperation between the two sides can be seen in the context of Operation Neptune through an attempt in the second half of May 1944 to improve the flow of intelligence from BP to the southern home naval commands, particularly Ramsay's expeditionary force headquarters (NXF), all the better to prepare for the invasion. On 24 February 1944, Ramsay for the first time met the intelligence staff officer of NS, F. H. Hinsley, who had earned a great reputation in naval intelligence circles ever since predicting the emergence of heavy German surface units from the Baltic back in mid-1940. Had his advice been followed, many thought, the loss of HMS *Glorious* to the *Scharnhorst* and *Gneisenau* that June could have been avoided. At their meeting, he told Ramsay about how BP could help pass on the right intelligence for the preparation of Operation Neptune.[18]

The discussion quite likely touched upon the benefits expected from two changes made shortly before the meeting. The first was that Ramsay had been given a signals' intelligence officer (SO[Y]), Lt. Cdr. D. H. Johnson, to maintain close liaison with BP and with OIC. Secondly, it had been possible to deal in a somewhat more satisfactory manner with the circulation of "static" intelligence gathered from decrypts. BP had been collating and plotting such material and passing on what was relevant to Neptune to Cdr. C. F. Tower, head of NID 1, who in turn passed it to the naval subsection of TIS. This had led to the problem of inquiries about sources from certain officers not "indoctrinated" into "Special Services," causing Tower some embarrassment. In mid-February, Commodore Rushbrooke (DNI) and Sir Stewart Menzies ("C", the head of the secret intelligence service [SIS]) agreed that NID should decide what should be passed on, but then have SIS staff process the material, to give the impression that it had come from agents, though to the "indoctrinated," the truth would be obvious.[19]

Whether or not Hinsley spoke about what had been done already, he almost certainly took the opportunity of the meeting to propose a radical change in the method of forwarding operational intelligence to the southern home naval commands, acting on the precedent of what had been done from the previous year with respect to the Mediterranean. Instead of passing them through OIC, BP wanted to send decrypts directly to the southern commands, including NXF, through one of its own series of Ultra grade signals—later to be known as the KV service.[20] These signals were to supersede Admiralty Ultra signals to those commands, except that NXF would still receive repeats of Ultras sent to officers at sea, when relevant to Ramsay's plans. The change was largely predicated on the fact that ANCXF needed a wider mix of intelligence than did the average naval commander in chief. He would have to be told of movements of all enemy forces that might imperil his vast task of getting the troops ashore and keeping them supplied. The KV service would provide Ramsay with a more generous supply of German air and army signals intelligence than OIC usually could, and through sending the naval material by the same means, the enemy's defense posture could be more easily seen as a whole. So as to ensure proper uniformity and coordination of intelligence among the various naval commands immediately involved in the channel, the other southern home naval commands would also have to receive the KV service, albeit on a restricted level, focusing on naval intercepts. The scheme was accepted on a trial basis from mid-May, and thus at one stroke BP took over part of the responsibility of OIC, much to the chagrin of the latter, despite its retaining the right to vet appreciations of enemy intent sent by KV, and also (with the exception that BP was allowed to call NXF and Portsmouth) the sole power to telephone the commands to explain, assess, and supplement.

The scheme did not work. It had been agreed that any appreciations sent by KV would first be cleared with OIC, but this did not always happen in practice. Some KV appreciations even contradicted OIC analyses.[21] NXF in particular seems to have found it very difficult to assess enemy intentions when it was being given contrary advice by BP and OIC, and pressed for a return to the previous system. OIC strongly agreed. From 31 May, the naval intelligence was sent again by Ultra messages from the Admiralty. For a time, those signals actually went via BP and KV, but from 6 June, the Admiralty again sent Ultra directly in the old way, though—as before 15 May—BP still fed NXF with non-naval intelligence through KV. Thus, there was a reversion to the previous system just in time for the invasion. It had in the end proven to be a somewhat confusing and troublesome experiment.[22]

The trial would have worked had the commands been able independently to assess both signals intelligence and appreciations. Unfortunately, this was not feasible, a point that lead to another cause of friction—the small size of the intelligence staffs at the southern commands, including NXF. There was a great contrast with the Mediterranean, which was able to cope with the decrypts sent directly from BP, but that command had its own OIC and even a cryptography section. There is a suggestion that Ramsay had a large intelligence staff, but further consideration shows many of the personnel were in place only shortly before D-Day or just after, so could not have helped in the KV experiment.[23] Furthermore, few of those who were there in May were concerned with the assessment of operational intelligence. There were the officers and civilians in the naval subsection of TIS, which also had come down to Southwick House at the end of April, but they of course were involved in the assessment of "static" intelligence, above all details of German coastal defenses and the topography of Normandy. The 30 Assault Unit was an even more specialized body, trained to accompany the invasion on D-Day and after, with the intent of seizing sensitive enemy documents for later close inspection and exploitation. The security officer and his staff were responsible for preventing intelligence material from straying; they had the often delicate task of trying to check the carelessness of some senior naval officers. Other officers specified on the figure were absorbed in liaison duties. The SO(I) of the United States was largely engaged in maintaining channels with his fellow nationals, including the Naval Commander of the Western Task Force (NCWTF), Rear Admiral Kirk, USN, and the officers of the U.S. assault forces (U, O, and B). The SO(Y) had his heavy liaison duties, including having to visit OIC once a day, which probably explains why he seems to have retained a Norfolk House office after the rest of Ramsay's staff had moved down to Portsmouth. Incidentally, his duties were so sensitive that—even though in some secret documents he was disguised under the title of assistant staff officer (intelligence) (ASO[I])—he is completely omitted in the restricted published diagrams showing Ramsay's staff. For instance, he does not appear on the diagram that is cited in note 23.

In turning to Captain J. H. Lewes, the assistant chief of staff (intelligence) (ACOS[I]), one finds another officer much taken up with liaison, this time with Whitehall departments, though he also had the serious responsibility of supervising and coordinating Ramsay's entire intelligence staff. He had been appointed in March 1944 in part because he had extensive experience in the Whitehall jungle, but—since he was senior to both Richardson and Rees-Millington—perhaps he was appointed primarily because he could bring their two sections under one head, ending an administrative division that had itself caused some difficulties. In turn, Richardson and his ASO(I) (the real one, not the SO[Y]) had their own absorbing duties. As spring 1944 wore on and D-Day approached ever closer, they were increasingly burdened with work, not just checking that the mass of intelligence material needed for the assault was distributed to the right people by the right time, but they were particularly concerned about assessing the operational consequences of Field Marshal Rommel's rapid thickening of the German defenses. Richardson—like Johnson and Lewes—was also drawn into that characteristic expression of modern British war making, the specialist committee. For instance, by April 1943, there were no fewer than three naval Overlord intelligence committees (meeting either fortnightly or weekly), each assessing different aspects of the coming effort. The membership varied, but always included men from NID—in particular OIC—and also one or more from NXF; Richardson and Lewes were each on two of them, and Johnson on at least one. It is not so much that these three committees in themselves demanded much of the time of the participants, but rather that we know about them only through the occasional references that appear in the archives. They serve to remind us of the many duties about which no trace remains.

In conclusion, it seems proper to ask just who at Southwick House had the time to give due consideration to the KV signals. We also have to weigh some other constraints; limits on the supply of suitable personnel and of training facilities meant that most of Ramsay's intelligence staff could be given only narrow and specialized training. Ramsay later complained that a more general training would have made possible far more interchangeability.[24] Some of his intelligence officers would then have been unable to advise on the KV material, even if they had had leisure to do so.

Much will remain obscure, without unexpected help from the archives, but at least one may suggest that Richardson, despite all his various commitments, was able to find some time for the consideration of KV; after all, he had an assistant to whom other duties could be delegated. Furthermore, due to his training in intelligence dating back at least to his service in the NID 1 "pool" at the beginning of 1943 and subsequent service as SO(I) to Force J before moving to Norfolk House, his advice on the operational exploitation of the decrypts would surely have been valuable. It also is quite likely—though there is no evidence—that some of the officers from Ramsay's operational staff were drawn in for the same purpose. The main burden during the May experiment was clearly on a single man, the staff officer (intelligence) operations (SO[I] Operations or SO[I] Ops). He had six subordinates, but they only joined him shortly before D-Day. Consequently, NXF was able to maintain an independent operational plot from a mere five days before the invasion—after, that is, the reversion to Ultra.

It is quite apparent that the KV experiment had been run on an intelligence shoestring. BP realized that it would be expecting too much to send out decrypts of enemy secret service or diplomatic traffic to the commands: to assess such material, one needed very specialized knowledge, but even decrypts of enemy operational signals themselves needed close attention. Moreover, experience was required: it had taken OIC itself a year of warfare before it had evolved adequate working practices in the treatment of operational intelligence. By mid-1944, 8K (the subsection composed of women) had about five members and could call for help if necessary from several other experienced members of staff. There is an obvious contrast with NXF in May 1944, where there were perhaps two men who were available for the task, one of whom had likely been suddenly pitchforked into it and the other had pressing concerns elsewhere. While the evidence for what has just been said is not entirely satisfactory, one should at least be able to agree that expecting NXF to deal with KV on its own was overly optimistic.

Ramsay was able to call for help from the Portsmouth command. If there was for long no operational plot at Southwick House, there was one at Fort Southwick, and there was also the staff of the intelligence subcenter. There—and, indeed, in the similar centers in the other southern naval commands—the situation was scarcely better than in NXF. Back in early 1943, the Portsmouth SO(I) had a staff of one sublieutenant RNVR and a Wren officer.[25] By mid-1944, he seems to have lost the sublieutenant but gained a second Wren. This was simply not enough. Here was the naval operational intelligence center for the whole Portsmouth command, and more so than with his colleagues at the other southern subcenters, the Portsmouth SO(I) was in frequent touch with OIC by scrambler; he was also supposed to visit in person once a week (by contrast, the Plymouth SO(I) managed to do so perhaps only every two or three months). Furthermore, his office was the carfax for an ever-increasing two-way flow of intelligence, "static" as well as operational. The flow could be overwhelming. Before computers, the sign of a successful intelligence organization was the threat of imminent death by paper. For NID, that point had been reached at least as early as July 1943, when Gonin made this assessment:

> There is now such a vast intake of paper that the filing system has become saturated. The files are so bulky that finding papers takes too long: they have already been divided and weeded out to the maximum possible.[26]

An attempt was made to ease the burden by the introduction in March 1944 of Supplementary Naval Intelligence Papers (SNIPS). These summarised important reports, and—the most useful aspect of the innovation—came with a regular and updated index to the whole series, so intelligence officers could have easy access and reference to what otherwise would have been an intractable mass of material.[27] SNIPS were a godsend to the harried SO(I), at home and abroad, and made it possible for him to keep up with vital intelligence matters at a time when the quantity of paper being produced was escalating. However, SNIPS did not deal with operational intelligence. There, too, the quantity steadily increased and was a growing burden on the small staffs that had to deal with it. Thus, one strongly suspects that the Portsmouth subcenter found it difficult enough to deal with its own immediate work, and it lacked the capacity to offer much help to Ramsay's intelligence staff.

One gets a better impression of the shortage of intelligence personnel, and even of the reasons behind it, when looking at the SO(I)s appointed to the imperial assault forces for Neptune. A report of 1948 argued that, during the war, NID had concentrated for too long on "method" and interservice organization, to the detriment of training sufficient SO(I)s for the offensives—Torch, Overlord, and those in the Pacific—that were to come.[28]

There is a great truth here that attention devoted to removing friction in one area can have the effect of creating it in another. The 1948 report was unfair in ignoring very serious constraints on personnel and training. The recruitment of women at the Admiralty and Portsmouth was in itself a sign of restricted manpower. There were also signs of such strain closer to the sharp end. Some new SO(I)s were trained for the Neptune assault forces; indeed, without them, the notable extension we have observed of the circuit for "Special Intelligence" would have been impossible, but it is clear that in providing them, the system was somewhat strained.

Rear Admiral Sir Philip Vian, the Naval Commander Eastern Task Force (NCETF), brought with him his own SO(I), Lt. Cdr. J. Cameron, RNVR (later the Hon. Lord Cameron). He was in his mid-forties, and in civilian life a distinguished lawyer. Like his legal colleagues who worked in NID, he doubtless found his earlier training of use in intelligence matters, but he had long been in the RNVR (he had joined at the end of the First World War). Furthermore, he had served under Vian for some time, including during the invasion of Sicily, and had gained much practical experience in dealing with operational intelligence. Though the navy list is not helpful on that point (even the wartime confidential version is noticeably reticent about intelligence officers), one presumes that the SO(I)s and the flag officers of the two cruiser squadrons (CS 2 and CS 10, also shown on figure 2 as receiving Ultra), were of a roughly comparable level of seniority and naval experience.

The officers who became SO(I)s of the imperial assault forces for Neptune were rather different. They seem to have been very junior officers, mere lieutenants RNVR of comparatively recent creation. Indeed, one or two were RNVR (Sp.)—that is, were in the special branch. Back at the beginning of the war, this would have suggested they were experienced seamen of a certain age—"Old and Bolds" as they were nicknamed—but too old or infirm to be full-time RNVR executive officers. Subsequently, though, younger men were put in the special branch, either because they were physically limited through reasons other than age, or because—while likely ignorant of the sea before joining the service—did at least have civilian experience particularly relevant to certain naval functions such as staff duties.[29] Whether the assault force SO(I)s were "Sp." or not, it does appear that there were hostilities.

In describing these SO(I)s, one is not necessarily identifying further causes of friction; in fact, the reverse was true. Youth tends to imply energy, stamina, and flexibility. Furthermore, in their youth, if not always in rank, new British naval SO(I)s at this late stage of the war were very similar to their opposite numbers in the other services. In addition, most were essentially civilians in uniform; they were virtually ideal interservice liaison officers. What did produce friction was that there were not enough of them, and their training could be inadequate. Already by 1943, the empire was scraping the barrel for personnel. The position was exacerbated by continuing recruitment for BP and increasing demands being made for larger staffs in the Far East. Despite the great importance of the operation, suitable recruits as naval SO(I)s for Neptune were in short supply. That lack was critically compounded—and here we can recall one of the inadequacies of Ramsay's intelligence staff—by difficulties in giving a proper training to those who could be found. Despite what was implied in the 1948 report, the need for SO(I)s for the Normandy assault forces was anticipated as early as August 1943. It was then assumed that, due to the pressure of the work, only three could be trained in the NID 1 "pool," but that it would be sufficient. Since Force J already had an SO(I)—by then it was Sub. Lt. O. E. S. Lloyd, RNVR—the other two imperial assault forces then anticipated could be supplied, leaving one man who could be lent to the USN if—as then seemed likely—they were short of an intelligence officer for one of their assault forces. It was thought desirable to have another as a "spare," but that appeared impossible, given the existing load on the NID 1 "pool."[30] As it happens, another did become available. Lt. J. F. Hay, RNVR (Sp.), apparently had been trained "on the job" in the Mediterranean, and, indeed, proved to be better prepared than the three from the "pool," who had received only sketchy training.[31] Furthermore, the USN found it had no need for a British SO(I). Even so, there was still no "spare." Lloyd was drawn into other NID work at the end of 1943, and in early 1944, the number of imperial assault forces was increased to four (S, J, G, and L) with General Montgomery's insistence that the initial attack in Normandy be made with five divisions, not three. (The U.S. assault forces were increased from two to three.) Instead of a slight surplus, British naval intelligence manpower again had only a bare sufficiency.

Shortage of trained personnel was probably the most serious of all the causes of daily friction within the intelligence network. It made inevitable ferocious hours and draining work for staff. (It was fortunate, then, that so many of the people concerned were young.) Overworking an inadequately sized staff could be beneficial, producing a sense of responsibility and a degree of concentration not otherwise achievable. Inevitably, it had drawbacks; perhaps above all, it was the possible collapse of sections of the network. In such a pared down system, a few individuals would inevitably emerge as crucial, even irreplaceable. Continued great strain might lead to their sudden cracking, all the more possible since some of the best workers were also highly strung. As was said in a paper of November 1947 by Paymaster Cdr. N. E. Denning, in charge of the part of OIC concerned with the German surface fleet, "there is no doubt that the most brilliant work was done by the highly strung, temperamental members."

One of those he referred to was Dr. Stewart. He said she was not only very good at her work, but also loved it. Nevertheless, the strain on her ultimately proved too great. She was terrified of lightning storms, and the unpredictable thunder of the V1 assault on London in June and July of 1944 represented the last straw: she broke down, and went on sick leave to Scotland, and Denning had what he called "the devil's own job to get her back."[32] Naturally, it was a great blow to lose the head of the OIC unit responsible for the channel only about a month after the allies had got ashore. As it happens, she was not quite irreplaceable. By then, she had a trained staff, but her absence meant an added burden not just for them but for Denning, who admitted to being "most uncomfortable" while she was away. Denning, along with Rodger Winn in the submarine tracking room, were the ones who could be considered as irreplaceable in OIC. Fortunately, Denning did not break down. Yet, the possibility of ruinous breakdown was always there. It had perhaps come closest back in December 1942 when, after many months of unprecedented strain, Winn was taken ill. Thanks only to great will and determination, and against his doctor's advice, Winn was back at his desk in the space of four weeks.[33]

There was a type of friction that would have been even more dangerous than the ill health of crucial personnel; indeed, it would have been the ultimate intelligence friction—the realization by the Germans that their Enigma codes had been broken, with the consequent virtual cessation of "Special Intelligence." To avoid this dreadful possibility, the allies accepted the lesser evil of taking great pains to avoid compromising the intelligence source when exploiting it operationally. Since the British were more vulnerable to German power than were the Americans, they tended to take greater precautions in the exploitation of Enigma decrypts. Through human error, however, even they came close at times to betraying the great secret.

One serious case occurred in the channel during the buildup to Neptune. On 19 May 1944, drawing on "Special Intelligence," OIC warned the Portsmouth SO(I) by telephone that three German warships (TLC III group) were due that evening to leave St. Vaast to carry out a swept-way patrol and then proceed to Cherbourg. The German vessels were particularly powerful and potentially dangerous opponents for any landing operation, so the Portsmouth officers were undoubtedly eager to try to destroy them. Some British MTBs had already been ordered to lay mines in the same area, and they were sent a signal stating that the enemy patrol "had been sighted" near the laying position, indicating an attack should be made. There had been no such sighting; proper "cover" had not been arranged, so that the Germans could reasonably surmise they had been detected by eye or radar before any attack occurred.

The correct procedure is illustrated by an example the previous January. On 19 January, an intercepted signal showed that two *Elbing*-class destroyers were to leave Dunkirk on the 20th for passage to Cherbourg. The information was passed by Ultra, but—lacking "cover"—was not acted upon. Once British shore radar picked up the enemy vessels off Gravelines, however, an interception was attempted: Albacores caught the enemy at Berck sur Mer on the 21st with the result that they succeeded in damaging one *Elbing*.[34]

In the May case, not only was interception attempted without proper "cover," but the signal announcing the "sighting" had been sent in a low-grade operational cipher that might easily have been read. An OIC report formed this conclusion:

> Such an undisguised use of Ultra information was without precedent and the clumsy coverage of air reconnaissance would most certainly have drawn the attention of less alert "B" services than the Germans.[35]

To speculate, one would suggest that two factors operated here. First of all, overwork in the Portsmouth subcenter, which meant the SO(I) was unable to ensure proper intelligence security—about which he had strict instructions—and thus allowed more initiative to the operations officers. Secondly, there was the undue enthusiasm of those operations officers concerned "to get on with the war." There was the possible rationale—inadequate though it would have been—that here was a chance of knocking out a potential threat to Neptune; but such unconsidered aggressiveness should rather be understood in terms of a typical attitude of mind of many executive officers. One ought to point here not simply at RN officers; many temporary RNVR executive officers showed themselves no less ebullient and aggressive. Both could be equally apt to ignore the preeminent importance of protecting intelligence sources. There had been similar cases before; indeed, the one cited is by no means the worst example of such a potential breach of security by the navy during the war. Fortunately, as in the previous cases, the Germans did not draw the proper conclusions. They had some excuse; by this stage of the war, they tended to overestimate the effectiveness of allied radar.[36] There was also an established tendency on the part of the German naval signals department unthinkingly to defend the security of the Enigma machine. Furthermore, generalizing about the whole of the war, Nazi officers were all too prone to blame intelligence leakages on spies or traitors, thought to lurk even within the axis armed forces. The easy option was taken in the Mediterranean of blaming Italians for passing on information to the British and Americans. The Wehrmacht, itself, was looked upon with suspicion, of which the best example is perhaps Hitler's accusing the generals who tried to assassinate him in July 1944 of having betrayed German secrets to the allies. Such blindness leads to our conclusion.

We must always see military history in comparative terms. We can identify types of human friction on the British side. Infamously, such friction was far greater on the German side, not just intra- and interservice, but also an inevitable and often crippling part of the working of the whole Nazi state.[37]

NOTES

1. Carl von Clausewitz, "Friction in War," in *On War,* trans. and ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), 119–21.

2. Adm 223/284. Unless otherwise stated, documents cited are at the Public Record Office, London.

3. [Lt. C. G. Rich, RNVR (Sp.SS.)], *Organisation of Intelligence Sub-Centre* (Portsmouth: ca. January–February 1943), Adm 199/2481.

4. Report by Cdr. Gonin, head of NID 1L, 22 July 1943, Adm 199/2489.

5. Cdr. Gonin, *Overlord* ([undated]), Adm 223/287.

6. G. G. M. Pritchett, *Summary of History of NID 1 with Special Regard to the Eventual Preparation of Intelligence for Overlord, from Memory,* Adm 223/287. Richardson's "Phoney Phleet" verses appeared regularly in *Punch* from 23 December 1942 and onwards.

7. Richardson, *Recollections of the Planning of "Neptune,"* note, ([undated]), Adm 223/287.

8. [Anon.], *Notes on Round Up and Overlord,* Adm 223/287.

9. Margaret Stewart, *Record of Personal Experience in the O.I.C.,* Adm 223/286.

10. Interview, 14 April 1997 and personal letter, ca. July 1998.

11. Dr. Margaret Stewart to Patrick Beesly, ca. June 1975, Churchill College Archives Centre, MLBE 2/3.

12. Gonin, *Overlord,* Adm 223/287.

13. Gonin, note, 10 January 1944, Adm 199/2481.

14. [Anon.], *Overlord and Special Intelligence,* Adm 223/287, 96; and Michael Whitby, "The Seaward Defence of the British Assault Area, 6–14 June 1944," *Mariner's Mirror* 80 (1994): 191–207.

15. Patrick Beesly, *Very Special Intelligence: The Story of the Admiralty's Operational Intelligence Centre, 1939–1945* (London: Sphere Books, 1978), 27; and C. I. Hamilton, "The Organization and Character of the Admiralty Operational Intelligence Centre during the Second World War," *War in History* 7 (2000): 295–324.

16. [Dr. Stewart], *Appendix to R. Barrett, Receipt of Special Intelligence in Admiralty and Its Dissemination: German Surface Units Section,* Adm 223/470.

17. D. H. N. Brookes, Historical Memorandum [undated], HW 3/139.

18. Robert W. Love Jr. and John Major, eds., *The 1944 Diary of Sir Bertram Ramsay* (Hull: University of Hull Press, 1994), 31, 48.

19. Rushbrooke to Menzies, 9 February 1944; Frank Birch, minute, 12 February 1944; and Menzies's draft reply to Rushbrooke, HW 14/97.

20. These were issued between 30 March and 28 June 1944.

21. F. H. Hinsley, KV note no. 21, ca. 20 May 1944, Adm 223/285. Also, KV 4477, Defe 3/157. See also Naval Section, Instructions for the KV Service, 11 May 1944, Adm 223/285; and F. H. Hinsley et al., *British Intelligence in the Second World War,* 3:2 (London: H.M.S.O., 1988): 780–82.

22. Hinsley, KV notes 27 and 28, 30 May and 3 June 1944, Adm 223/285.

23. The main source for the figure is the report by the ANCXF on Operation Neptune, 1:52–53, U.S. Air Force Archive, Alabama, m/f A5161.

24. Ibid, 50.

25. [Rich], *Organisation of Intelligence Sub-Centre,* Adm 199/2481.

26. Gonin report, 22 July, Adm 199/2489.

27. See the paper "S.N.I.P.S.," Adm 223/475.

28. *Training and Administration,* chapter IV, "Training," 51f, Adm 223/473. Even if Admiral Godfrey did not write this, it had his imprimatur.

29. "Sp." was not the same as "Sp.SS," which signified officers who were "employed on staff, etc., duties ashore . . . [and] have not received any training of an executive nature" (AFO 523/41, Adm 182/105).

30. [Anon.], memorandum, 26 August, Adm 199/2481.
31. NID 17F to ANCXF, memorandum, 16 January 1944, Adm 199/2481.
32. Denning, *Operational Intelligence Centre,* 5, Adm 223/286.
33. Beesly, *Very Special Intelligence,* 206f.
34. [Anon.], *The Use of Special Intelligence in Connection with Operation Neptune, January 1944–September 1944,* 16, Adm 223/287.
35. Ibid, 64f.
36. German E-Boat Operations and Policy, 1939–1945, Adm 223/28: 54, 79, 80f, 83f. For a recent study, see John Foster Tent, *E-Boat Alert: Defending the Normandy Invasion Fleet* (Annapolis: Naval Institute Press, 1996).
37. Ronald Lewin, *Ultra Goes to War: The Secret Story* (London: Hutchinson, 1978), 212–14, 302; and Timothy Mulligan, "The German Navy Evaluates Its Cryptographic Security, October 1941," *Military Affairs* 64 (1985): 75–79.

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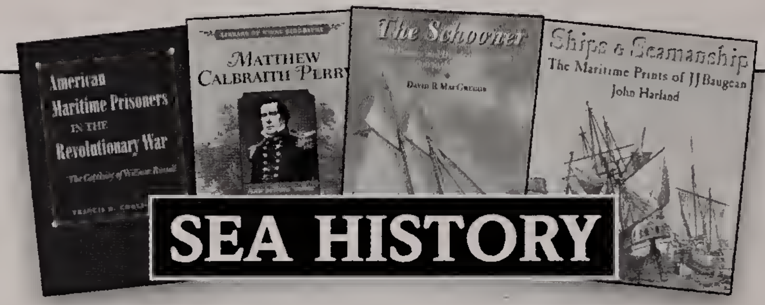

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THE *CHARLES H. DAVIS* (AGOR 5)/HMNZS *TUI:*

A SHIP'S STORY

by Carlyle H. Whipple

Recently, while looking out over Sturgeon Bay from the Door County Maritime Museum and viewing the various ships in winter quarters at Bay Shipbuilding, a question occurred to me: "Whatever happened to the *Charles H. Davis* (AGOR 5), built by the Christy Corporation (now the Bay Shipbuilding Company) in 1962 as a deep ocean research vessel for the United States Navy?"[1] It did not take me long to discover that on 20 February 1999, she was scuttled and went down one hundred feet to the bottom of the Pacific Ocean a quarter of a mile off the northeastern New Zealand coast two miles north of Tutukaka Harbor at 35°34.58′ S, 174°32.30′ E. This is her story, from when she first got her bottom wet in Sturgeon Bay at 44°50.8′ N, 87°24.2′ W until she ended her sailing career in the Bay of Plenty off of New Zealand.[2]

The *Davis* was the third ocean research vessel of the *Conrad*-class of eleven vessels. They were United States Navy oceanographic research vessels and were built between 1960 and 1968 as part of the Ten Year Program in Oceanography (TENOC). Three were assigned to universities and two to the Navy Oceanographic Office. The remainder, including the *Davis,* were assigned to the Naval Underwater Sound Laboratory, operated by the Military Sea Transportation System (now called the Military Sealift Command).[3] This was under the technical control of the U.S. Navy Hydrographic Office and operated on both coasts.[4] *Davis* went to the West Coast pool.

The Christy Corporation of Sturgeon Bay, Wisconsin, was awarded the construction contracts on 21 November 1960 for the *Davis* and the *James M. Gilliss* (AGOR 4) at a combined cost of $4,509,411.[5] Keels for both vessels were laid 31 May 1961 with the *Gilliss*'s completion date set for September 1962 and that of the *Davis* slated for November.[6] Their design had been developed by the navy's bureau of ships; they were the first specifically

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built from the keel up for oceanographic research. For the ultimate elimination of noise during certain phases of research, the diesel generators would not be used, and power would come from a gas turbine generator. Another special feature was her bow propulsion unit that consisted of a three-foot propeller connected to a vertical shaft that was, in turn, geared to a diesel engine. During normal cruising, the lower part of the unit could be recessed into the hull on the ship's bottom toward the bow. When the ship was on station, it would be lowered and used to provide extra maneuverability. She was designed to advance knowledge of the oceans, thereby increasing the effectiveness of naval operations, weapons systems, and ship and equipment design. The *Davis* would be a platform for many experiments, a laboratory that goes to the loneliest areas of the oceans, and a mobile home for seamen and scientists who are cooperating to extend the horizons of man's knowledge of the sea.[7]

The vital statistics for both ships were 208′10″ in overall length, 37′5″ in beam, a full load draft of 15′2″, a full-load displacement of 1,370 tons, a steel hull with diesel electric propulsion, and an additional gas turbine electric power pack driving a bow propulsion positioning unit with a single screw.[8]

The *Gilliss* was launched and christened at Sturgeon Bay on 19 May 1962 and the *Davis* on 30 June 1962.[9] Captain Harold J. O'Neill, a navy spokesman, stated that the vessels and their research of the ocean depths were necessary for effective operation of deep-diving nuclear submarines and for communications, navigation, and detection study.[10]

The *Davis* was named for Rear Admiral Charles H. Davis (1807–77) and his son, Rear Admiral Charles H. Davis Jr. (1845–1921). In 1852, Admiral Davis was named as the head of the Bureau of Navigation and served in this capacity until 1865. During his tenure at the Naval Observatory (1852–67 and 1873–77), he produced the annual *American Ephemeris and Nautical Almanac,* which provided essential information for celestial navigational calculations for mariners.[11] He was one of the founders of the National Academy of Sciences in 1863. The vast majority of his naval career, from his appointment as a midshipmen in 1824 until his death, was spent in maritime-related scientific matters.[12]

Davis's son, Charles Henry Davis Jr. (1845–1921), wrote a biography of his father. His career followed closely that of his father from his graduation from the Naval Academy in 1864 until his retirement in 1912. His tours of duty and commands included astrological and geodetic survey work at the Naval Observatory, field expeditions to establish the exact longitude to be used by the Atlantic cable, superintendent of the Naval Observatory, and a commissioner for various international maritime disputes.[13]

The *Davis* departed Sturgeon Bay in January 1963 and sailed into the Atlantic Ocean via the St. Lawrence Seaway. After successfully completing her sea trials, she was placed in naval service on 21 January 1963 and assigned to the Navy's Military Sea Transportation Service (MSTS). The *Naval Vessel Register*'s (NVR) information for the *Davis* is minimal. It gives her class as AGOR 5, indicating that she was loaned or leased to New Zealand, gives her vital statistics, states that she was delivered to the navy on 25 January 1963, was never commissioned, and was stricken from the register on 16 October 1997 when her useful life was determined to have ended.

No records can be found for the details of the *Davis*'s U.S. Navy life other than her launching, christening, assignment to the West Coast MSTS laboratory, and her being leased for five years to the Royal New Zealand Navy in 1970.[14] Since she was a christened and not a commissioned ship, her deck logs are not retained at the National Archives. As an MSTS ship, these logs should be with the commander of the Sealift Command in Washington, D.C., but they are not to be found there. The Office of the Naval Historian merely has a single page data sheet in the *Naval Vessel Register* (NVR).

In an attempt to fill in the history of the *Davis* from the time she left Sturgeon Bay until she was leased to the New Zealand Navy, extensive research was done using the auspices of the United States *Navy Vessel Register,* the Office of the Naval Historical Center, the National Archives, the historian of the

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REVIEW
● WILL MSTS GET SUBMARINE?
GOR5
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MILITARY SEA TRANSPORTATION SERVICE

Launching of the *Charles H. Davis* (AGOR 5), Sturgeon Bay, Wisconsin, in November 1962. Courtesy of the U.S. Navy.

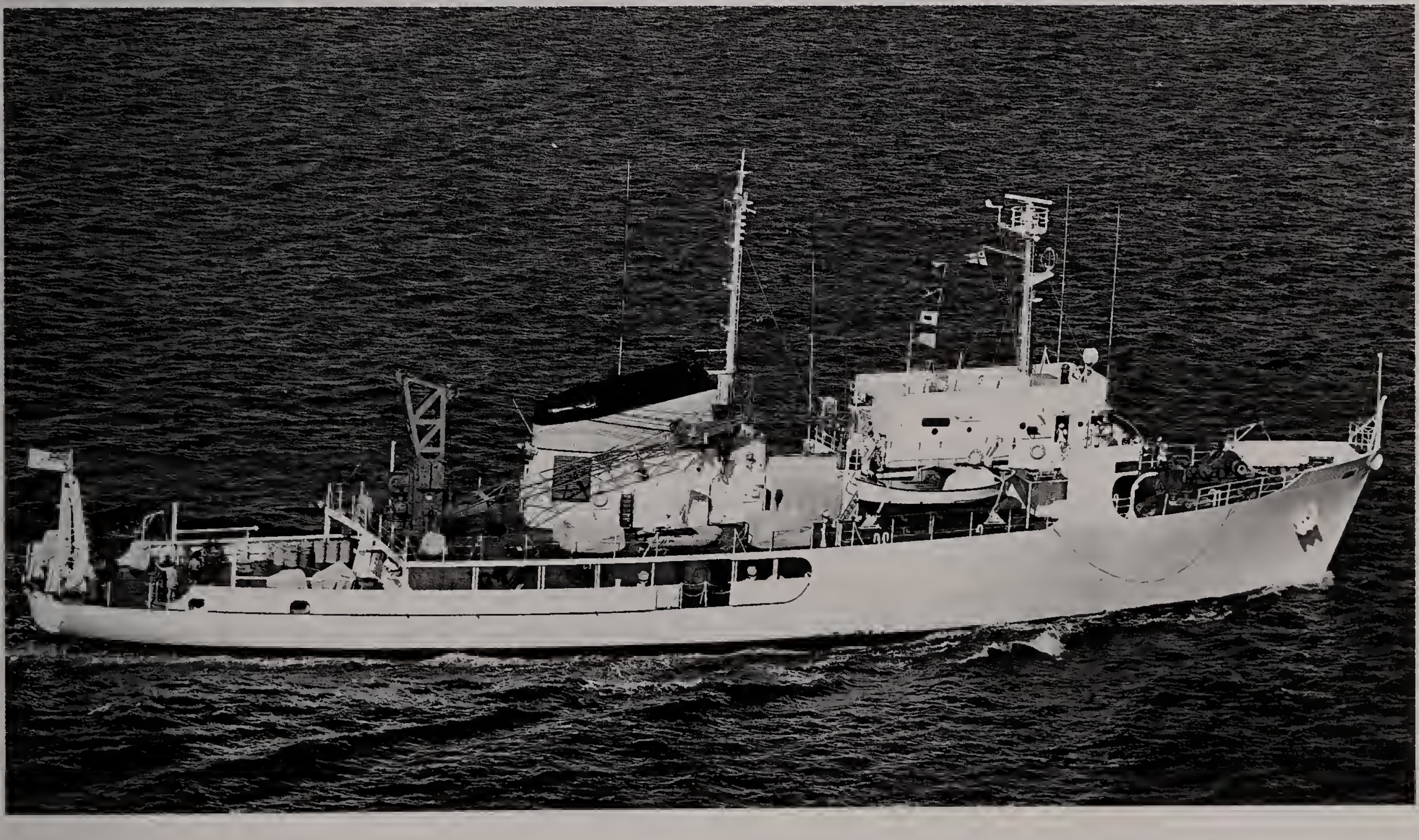
Charles H. Davis (AGOR 5) after its initial launching. The precise location and date of this photograph are unknown. Courtesy of the U.S. Navy.

National Oceanographic Atmospheric and Space Administration, the historian of the Military Sealift Command, and the historian for the Brooklyn Navy Yard. None of these governmental offices had any information with respect to the *Davis*'s navy tenure. Since she was not a commissioned ship, no federal maritime record-keeping agency other than the Military Sealift Command would have retained any files pertaining to her, including the daily deck logs. NOAA's historian speculated that the *Davis,* like many of the other vessels of her class, was never assigned to any duty whatsoever by the United States. Eventually these vessels were leased to various foreign navies, including New Zealand, as in the case of the *Davis.* Consequently, the speculation set forth in Fahey's *The Ships and Aircraft of the U.S. Fleet* is probably correct in suggesting that, during the *Davis*'s tenure with the navy, she remained moored in the National Defense Reserve Fleet under the Maritime Administration's custody.[15] The New Zealand Navy's history of the *Davis* states that she was in reserve for some years before being leased to New Zealand. The only recent update of the NVR record states that she was stricken from the register on 16 October 1997 when her useful life was determined to be ended. Was the *Davis* involved in some top secret, clandestine Cold War service for the navy from 1963 until 1970 or was she merely tied up at dockside when pooled at the navy's West Coast labs? We do not know for certain at this time. Sometime in the future, there may emerge a story of a Cold War intrigue concerning this vessel; alternatively, one could argue that approximatley $2.5 million of taxpayers' money simply sat at a dock in San Diego doing nothing for seven years.

The Royal New Zealand Navy picks up *Davis*'s story on 9 October 1970, when she was struck in the stern with slight damage by the tug *Michael Moran* while berthing her as a dead ship at the Navy Yard in Brooklyn, New York, pending her custody transfer. The Royal New Zealand Navy was offered the *Davis* by the U.S. Navy on 28 July 1970, on a loan basis. This was for an initial five-year period commencing in July 1970 and subsequently renewed for the remaining life of the vessel. After her delivery to New Zealand and a partial refit, the *Davis* was renamed *Tui* after an earlier New Zealand Navy minesweeping corvette that served with distinction during World War II.[16]

After a short refit at the Brooklyn Navy Yard, the *Davis* was commissioned into the Royal New Zealand Navy on 11 September 1970 as Her Majesty's New Zealand Ship (HMNZS) *Tui*. Her original five-year lease was renewed for a second five years in 1975 and an additional fifteen years in 1980. Her assignment would involve primarily the oceanographic research program of the Defense Scientific Establishment (DSE). Utilizing both diesel engines, the vessel service speed was eleven knots; on one diesel engine, it was seven and one-half knots; and for quiet running on gas turbines, it was five knots. The crew accommodation was five officers and thirty-two enlisted men. Additionally, nine scientists were accommodated in four double cabins on the main deck and one single cabin on the lower deck. These were unusual accommodations for a naval vessel in that all personnel were accommodated in cabins, having single, double, or four berths. All singles and most double cabins contained their own stall and toilet facilities. Another unusual feature for her time was that the ship was fully air-conditioned.[17] The rank of her commanding officer was that of a lieutenant commander in the Royal New Zealand Navy. The executive officer was normally a naval lieutenant. The vessel had equipment for deep-ocean anchoring, heavy-lifting capability with substantial depth capacity, cabling, magnetometer and acoustical services, and had dry and wet laboratories.[18] After arriving in New Zealand, the ship was fitted with electrical cable-handling facilities that could carry up to four miles of cable and associated measuring and handling equipment.

When interviewed about the voyage to New Zealand from New York, her first captain in the forces of New Zealand, Commander J. I. Quinn, had this commentary for the *New Zealand Herald* on 11 November 1970:

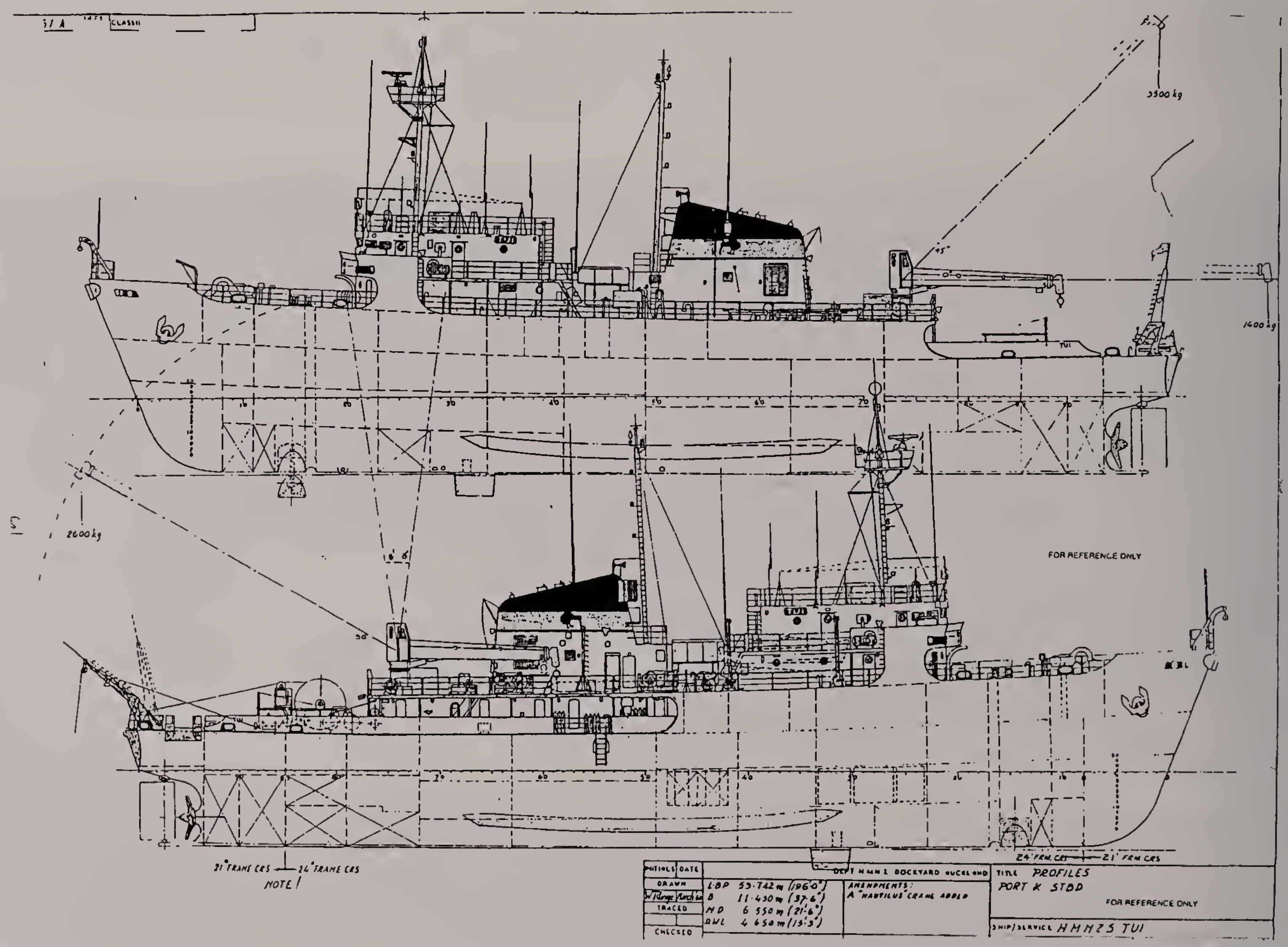


HMNZS *Tui* flying the white ensign of the Royal New Zealand Navy. The location and date of the photograph are unknown. Courtesy of the Royal New Zealand Navy.

> A good sea boat . . . a very fine platform for any scientific work the Laboratory has to offer. She can be rigged for silent running to enable acoustical work to be carried out without interference. Extra equipment will have to be installed in Auckland to make this possible. The ship is equipped for working with all conventional oceanographic equipment such as water and temperature sampling, seabed coring, trawling and underwater cameras. Using available deck machinery, scientific staff will be able to handle a wide range of physical, chemical, biological and geological sampling.

Tui's normal area of operation was bounded by Australia, New Caledonia, Fiji, and the Cook Islands. Her operational range was fifteen thousand nautical miles.[19] With her refit completed and the scientific equipment installed and tested, she commenced her sea trials on 3 October 1971. The *Tui* was assigned to the Defense Scientific Establishment (DSE), formerly called the Naval Research Laboratory, at Auckland, her home port.[20]

While assigned to the DSE, *Tui* went unobtrusively about the type of research for which she was designed, which was primarily underwater acoustics. She called from time to time at various New Zealand ports, worked in Australia, the Indian Ocean, and South Pacific waters as well as doing research for the Universities of Auckland and Hawaii. She participated in several American research programs, one of which encompassed the breadth of the Pacific Ocean



Line drawing of HMNZS *Tui*. Courtesy of the Royal New Zealand Navy.

from Australia to near the coast of Peru. Her acoustic research pertained mainly to the detection and tracking of submarines. Much of the *Tui*'s research was made available to other scientific and industrial organizations and for the compilation of hydrographic charts. She occasionally would be involved with ceremonial duties and fleet exercises. Although primarily equipped for underwater acoustic research, the tasks undertaken were many and varied, including water sampling, mapping underwater volcanoes, testing parachutes for use as sea anchors, servicing lighthouses, acoustical experiments, and developing antisubmarine towed arrays.[21]

Her coastal survey and research work for New Zealand continued until September 1974 when she had a general major refit of the vessel and repairs to her main generators. The remainder of 1974 found her operating in oceanographic research in tandem with the HMS *Hydra.* The vessel's logs reveal numerous diversions from her usual oceanographic activities to assist in search and rescue missions for crafts at peril in the Tasman Sea and South Pacific. The next three years found the *Tui* performing general coastal survey and maritime research in waters of interest to the New Zealand Navy. There were some social occasions that occurred on board, such as 6 June for Queen Elizabeth's birthday and 4 August for the Queen Mother's birthday. The University of Auckland in 1981 conducted underwater acoustical trials from her deck. She engaged in combined police/customs operations against suspected drug runners in November 1982 and frequently participated as New Zealand's representative in various diplomatic and social events among New Zealand's Pacific Island neighbors. July 1983 found her searching for sunken depth charges, and in August, she was again doing the police/customs duty for suspected drug runners. The year 1984 was consumed with hydrographic research. Her missions occasionally took her to Sydney, Australia, or the Great Barrier Reef.

The following article appeared in the *Auckland Herald* on 10 April 1985:

> A BOARDING PARTY TAKES *TUI* TODAY
>
> It will not be the Americans trying to reclaim it in retaliation for New Zealand's ban on nuclear war ships. Rather, it will be a party of workmen going over to Devonport to rip asbestos laden insulation material from its engine exhaust. The *Tui* is undergoing a refit that should extend its life until the lease expires in 1993.

The *Timaru Herald* gave the following report on 24 August 1987:

> HMNZS *Tui,* in port at Timaru, is an unusual ship in the New Zealand Navy because it is owned by the United States. The ship is in port for liberty after operating with the Ministry of Agriculture and Fisheries off the west coast of the south island checking on the fleet of crawlers fishing the hokie run. There were 35–40 crawlers off the west coast. All of them joined ventures with New Zealand, but mostly with Russia, Korea and Japan. Half of these did not a have a New Zealand official aboard.
>
> From the fisheries, officers made checks on these ships' nets and fishing standards.

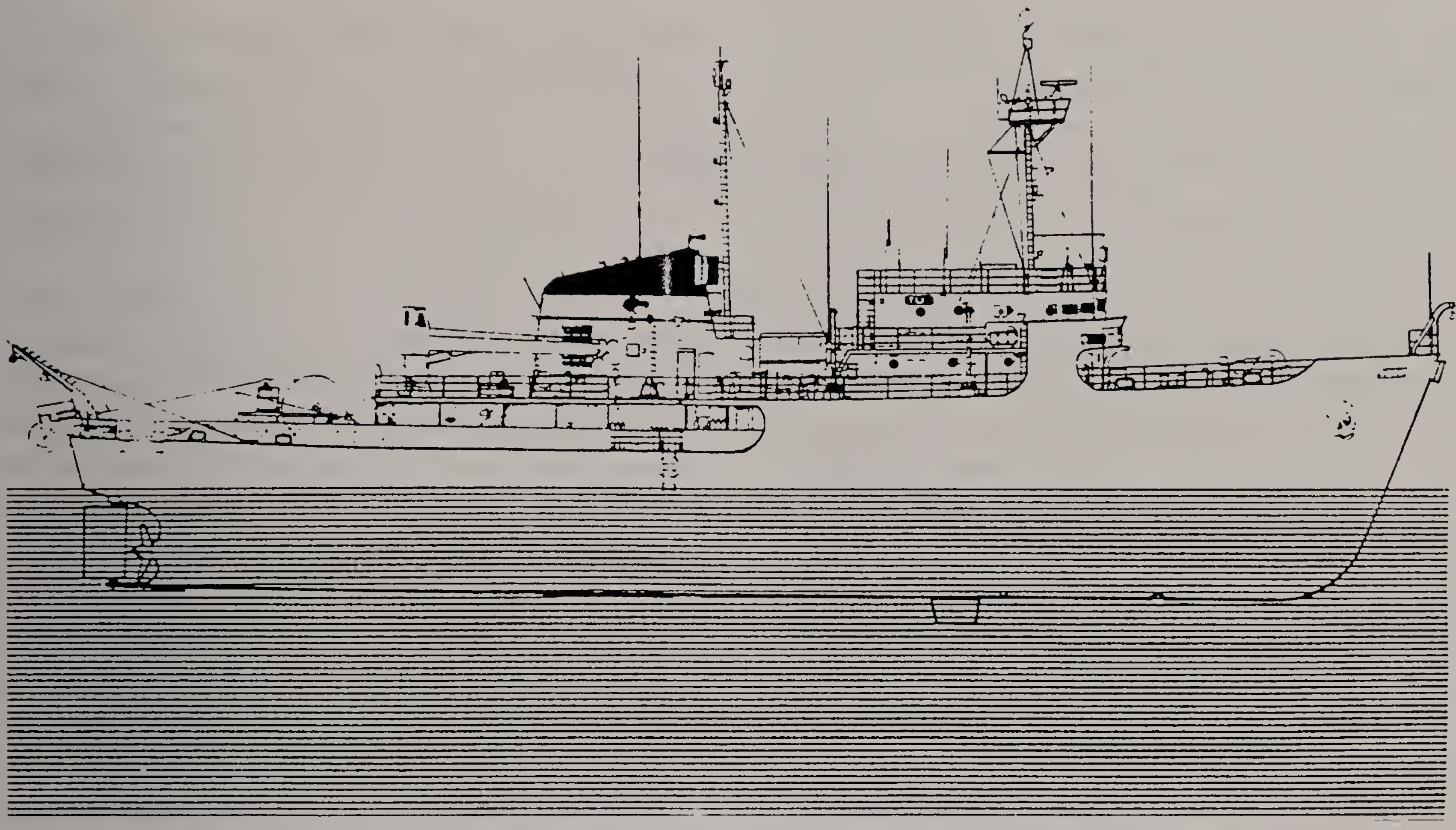
In September 1987, the *Tui* was equipped with mine countermeasures (MCM) equipment. *Tui* in 1988 located an active underwater volcano at 122 miles off New Zealand while transiting the area on her way to the South Pacific Forum in Tonga. It was the classic volcano cone shape reaching within 340 feet of the seas' surface, venting gas so that the *Tui*'s crew could smell sulfur. It was noted that the ocean turned from a very darkish blue to a very bright blue as if a large pool of dye had been spread over the ocean. This volcano has the potential of causing navigational problems for super tankers having drafts of twenty to thirty meters that frequently transit the area. In 1990, the crew of fifty-two persons included three women sailors as well as ten scientists. The work of the *Tui* was primarily scientific research. Her captain, Lieutenant Commander Owen Hanley, described his position as an enjoyable job doing primarily pure research with the ship and crew having very little to do with regular navy work. It was not uncommon for her to serve as a guard ship during various maritime celebrations and festivals in New Zealand. Some of her marine survey work extended as far as the Indian Ocean. *Tui* made trips to the Coral Sea and to Guadalcanal for the August 1992 fifty-year anniversary of those battles. She participated in military maneuvers, such as being the command ship for aerial minelaying by the Royal Australian Air Force in April 1995 and in military training activities with the Australian Navy. On 10 June 1995, the ship was dressed for the birthday of Prince Philip.

While returning to New Zealand from Sydney, Australia, and when she was about 230 nautical miles east northeast of Sydney in July 1993, the *Tui* discovered and retrieved the body of an elderly man in a life raft on the Tasman Sea. The ship's inflatable boat was lowered, sped out to the raft, and the crewman found the decomposing body under a collapsed canopy. The man had no apparent injuries and lay in the corner of the raft dressed in trousers, shirt and sweater. It was estimated that the man had died two or three days before being discovered. His body was wrapped in a plastic bag and placed in the *Tui*'s freezer to prevent further decomposition until it could be turned over to the police at Sydney after the ship reversed its course. The body was subsequently identified as a 70-year-old Italian by the name of Gino Susini. The Australian coroner stated that the cause of death was uncertain but it could be due to exposure or dehydration. The deceased had built his own forty-foot ketch called *Schedir* and had been sailing it around the world for two years. He had left Tahiti in early June bound for Sydney, where he expected to meet his son. Relatives of Mr. Susini identified his body. His passport and a few other documents were found in the raft.

In December 1993, the *Tui* went aground near Mahia Peninsula, south of Gisborne, North Island, New Zealand. Her commanding officer, Lieutenant Commander Warwick Sullivan, was charged, court-martialed, and convicted of endangering and negligently damaging the vessel. The conviction resulted in Commander Sullivan being reprimanded. On appeal, the conviction was reversed and Commander Sullivan acquitted of the charges with the appellate judge commenting that "The Commander had a good plan, was careful, not compulsive or over-enthusiastic, and was operating under difficulties which included the lack of land based information, inadequate global positioning readings, a difficult coastline, and an unreliable echo sounder." These factors had a bearing on whether he was negligent. It would seem too harsh to blame the appellant if, indeed, the vessel struck an uncharted route. The reviewing judge blamed "command influence" for the verdict. The reprimand, which would have affected Commander Sullivan's promotional prospects, was removed from his record.

It was rumored in July 1995 that the New Zealand government would be sending vessels to the Moruroa Atoll French nuclear test sites with speculation that the *Tui* would be the likely governmental choice. The atoll was 4,700 miles from Wellington, and the New Zealand frigates could travel ten thousand miles without refueling although they only had a one-month water supply. The *Tui,* by contrast, had a range of fifteen thousand miles, could generate her own fresh water, and would be able to make the transit in ten days and could remain on station for about a month. The range factor was important because the Navy could not anticipate that any of their vessels would be welcome in Tahiti to refuel. Given the endurance of the *Tui,* it would not be necessary to refuel during the mission. She could carry sufficient provisions on her foredeck to resupply the yachts that made up the civilian protest flotilla with food and other necessities.

In August 1995, *Tui* was assigned to go to Moruroa to insure the safety of the rest of the New Zealand peace flotilla. Speculation was that this would be her last mission and that she would soon be put in the operational reserve, a precursor to decommissioning upon her return. Her trip was the last until late in October, and she was under orders



Line drawing of HMNZS *Tui*. Courtesy of the Royal New Zealand Navy.

to stay between twelve to twenty miles off the atoll commencing on 25 August.[22] She arrived on the scene on 24 August and was joined on 27 August by SV *Rainbow Warrior II* and *RV Vega*, both Greenpeace vessels.[23] New Zealand's prime minister's letter of protest was delivered to the French authorities on 28 August.

The *Tui*'s captain for the mission, Lieutenant Commander John Campbell, stated, "We are an ideal ship [for the mission]. We are not armed. We literally have only a shark rifle and that's it." He was not expecting the vessels already heading for Moruroa to cause any trouble, but "If any choose to go within the twelve mile exclusionary zone, they will be on their own." Campbell described the *Tui* as the mother hen to the protest flotilla, but not a mother ship. Her role was to be there in case of emergencies and would not interfere in any confrontation, especially within French territorial waters. She was to alert any yacht crossing the twelve-mile line, advise it against violating it, and report to Wellington on any skirmishes. She was to be neutral and would not accept any ship invitations from the French or any overtures from Greenpeace. *Tui* would pass daily weather forecasts to the flotilla, but any further help would only be in the event of an emergency and consist of providing the yachts with water, fuel, provisions, or medical assistance. The atomic test personnel component of the vessel was forty-one crew members and ten civilians.

It turned out that the atomic testing mission was the last time *Tui* was at sea. Upon her return to Auckland after seventy-seven days, she was welcomed by the Prime Minister Jim Bolger and Commodore J. G. Leonard, a top New Zealand sailor. The prime minister stated in his formal words of welcome that "I, and the rest of New Zealand, are proud of what you have achieved." Following this welcome, *Tui* was posted to the "operational reserve," which was a twenty-one days' readiness to put to sea, but it was in reality a signal that the *Tui* was unlikely to be used again. In placing her in the "operational reserve," the navy commented that "There is evidence of her advancing years and limited remaining useful life."

The *Tui* was decommissioned by the New Zealand Navy on 18 February 1998. The white ensign of the Royal New Zealand Navy was lowered for the last time, and she was destined to be sold for scrap. She had, under eighteen commanding officers, served her oceanographic research purposes admirably for the New Zealand Navy. She had been of little significance to the New Zealand public until 1995 when she served as the flagship for the protest fleet during the French military's final series of nuclear tests at Moruroa Atoll. This role gave her a link to the more famous *Rainbow Warrior* now resting on the seabed fifty miles north of the proposed scuttling site for *Tui* at Tutukaka. The Tutukaka development committee was aware of the success of the *Rainbow Warrior* as a popular tourist attraction for diving and fishing after the *Warrior* had been intentionally scuttled as part of an artificial reef at the Cavalli Islands off Matauri Bay at Northland in the National Maritime Preserve.[24] Simultaneously, with the announcement of her pending decommissioning and retirement from active naval service, interested New Zealanders in the tourist and recreational communities approached the navy with the concept of having her placed as a recreational diving site off the New Zealand coast in the Poor Knights Islands Marine Reserve.

Tui dive site promoters were eager to obtain a steel vessel like the *Tui* since the *Rainbow Warrior* was built from a composite of steel and aluminum and was corroding away at a much faster rate than would the *Tui*. The Tutukaka Coast Promotions Society was the driving force behind the *Tui* project. It took the group two years to convince the New Zealand Navy that it could adequately handle and manage the project. The proposal was developed by a small group of committed individuals from the Tutukaka Coast Promotions Society, rather than by a government-backed tourism body. The society was successful in its bid for the *Tui* and purchased her for fifty thousand dollars (N.Z.) (twenty-five thousand dollars in U.S. currency) after it had failed to get the New Zealand Navy to donate the vessel as a goodwill gesture.[25] Through community interest and effort, it was determined that the *Tui* would become part of the Poor Knights Islands Marine Reserve that had been recently created by the New Zealand government off the coast of Tutukaka.

The Poor Knights Islands Marine Reserve is one of several New Zealand marine reserves and is located off the northeastern shore of New Zealand's North Island at Tutukaka. It consists of sea, islands, and seabed in which all marine life is protected and free from exploitation just as at national parks. The islands have remained isolated from animals introduced to mainland New Zealand and consequently contain many native species that are now extinct or extremely rare on the mainland. Boating, diving, and recreational fishing are permitted, but commercial fishing is prohibited.

Tui was physically better fit than a regular naval vessel to be an object of recreational diving because she was a purpose-built ship, having many wide inside passageways together with hitches and comparatively large interior spaces, making her more attractive to divers than a warship. Prior to its sinking, *Tui* was environmentally sanitized with the removal of her diesel engines and any possible pollutants. The vessel was also made safe for divers with the removal of all windows and exterior doors and hatches and the welding open of all interior doors. Her mast and propeller have been placed on the shore at Tutukaka, forming part of a permanent memorial to the cordial friendship and historical relations that exist between the United States and New Zealand.

Surrounded by recreational boats of all descriptions, *Tui*'s seacocks were opened and she settled to the bottom on her side in one hundred feet of water on 20 February 1999. The event was festive and included speeches by local dignitaries, U.S. Naval personnel, and Josiah Beeman, the American ambassador to New Zealand. Since her sinking, *Tui* continues to serve her adopted country, New Zealand, as a popular dive site.[26]

Notes

1. Stewart B. Nelson, *Oceanographic Ships, Fore and Aft* (Washington, D.C.: Office of the Oceanographer of the Navy, U.S. Government Printing Office, 1971), 16. The AGOR stands for Auxiliary General Oceanographic Research, and "5" designates that she was the fifth vessel in the series.

2. Royal New Zealand Navy Museum, Devonport, Auckland, New Zealand.

3. The Military Sealift Command (MSC) is one of three U.S. Navy commands. Its function is to provide the sea transportation necessary to support the mission of the United States Department of Defense. In 1999, the Military Sea Transportation Service, renamed Military Sealift Command in 1970, became the single managing agency for the Department of Defense's ocean transportation for all military services as well as other governmental agencies. Presently, MSC operates about one hundred and thirty ships and is organized into the following five key programs: Naval Fleet Auxiliary Force, Special Missions, Propositioning, Ship Introduction, and Sealift. The Special Missions Program is the smallest of the five MSC programs and is composed of about thirty ships. These ships carry out a wide variety of highly specialized missions including oceanographic surveys, missile tracking, coastal surveys, cable laying and repair, submarine escort, deep submergence rescue support, and other unique navy operations. These special mission ships are either owned by the U.S. government or chartered vessels that are operated by civilian mariners or mariners employed by companies under contract to MSC. Military and civilian scientists and technicians carry out unique missions on various types of ships.

4. News release, Department of Defense, Office of Public Affairs, Washington, D.C., 29 June 1962, no. 1090–62.

5. *Door County Advocate,* 29 November 1960; and *Naval Vessel Register* (NVR). The *Naval Vessel Register* is the official inventory of ships and service craft in custody or titled by the U.S. Navy and traces its origins back to the 1880s. Once listed, the ship or service craft remains in the NVR throughout its life as a navy asset. Afterwards, its final disposition is recorded.

6. *Door County Advocate,* 15 May 1962.

7. *Sealift Magazine,* October 1962, U.S. Navy Military Sea Transportation Service, Washington, D.C.

8. *Door County Advocate,* 15 May 1962; and *Naval Vessel Register.*

9. Peter Kemp, *The Oxford Companion to Ships and the Sea* (Oxford: Oxford University Press, 1976); and *Webster's New Twentieth-Century Dictionary, Unabridged* (Springfield, Mass, 1971). U.S. combatant ships are commissioned, while noncombatants are christened. When commissioned, a warship is fully equipped to carry out its allocated duties and flies a commissioning pennant at the masthead during its active service life. A christened ship is merely named.

10. Norman Polmar, *The Ships and Aircraft of the U.S. Fleet* (Annapolis: Naval Institute Press, 1984), 259–60.

11. Benjamin W. Labaree et al., *America and the Sea: A Maritime History* (Mystic, Connecticut: Mystic Seaport, 1998), 344.

12. Allen Johnson and Dumas Malone, eds., *Dictionary of American Biography* (New York: Charles Scribner's Sons, 1930), 5:106–7.

13. Johnson and Malone, *Dictionary of American Biography*, 5:107–8.

14. *Sealift,* October 1962.

15. John C. Fahey, *The Ships and Aircraft of the U.S. Fleet* (Annapolis: United States Naval Institute, 1965), 48; and Nelson, *Oceanographic Ships*, 161, 221.

16. Tui: *Information for Naval Families* (Royal New Zealand Navy, 1977), 3.

17. Tui: *Information for Naval Families,* 5, 7.

18. *HMNZS* Tui: *Oceanographic Research Ship, Defense Scientific Establishment* (Royal New Zealand Navy, 1985),

2, 6.

19. *Royal New Zealand Navy Backgrounder:* "HMNZS *Tui*: Oceanographic Research Ship," 2, 3.

20. Unless noted otherwise, the *Tui*'s New Zealand naval history has been extracted from her daily deck logs (the daily reporting of the activities of the vessel) that were graciously furnished by the Royal New Zealand Navy Museum, Devonport, Auckland, New Zealand.

21. HMNZS *Tui* decommissioning ceremony, Royal New Zealand Navy Museum, 18 February 1998, 2.

22. *New Zealand Herald,* 8 August 1995.

23. Ten years previous to this mission, the *Rainbow Warrior,* a Greenpeace environmental protest boat, was mined by French commandos and sunk with the loss of one life while she was moored in Auckland Harbor to keep her from participating in the 1985 peaceful protest of the French nuclear testing in the Moruroa Atoll (*North Shore Times,* 10 August 1995). A related web site is www.scuba-New-Zealand.co.nz.

24. Royal New Zealand Navy Museum. Diving on old ships scuttled to make artificial reefs has become extremely popular with North American divers. The United States has 483 such artificial reefs with the 366-foot Canadian destroyer, HMCS *Yukon* added to the San Diego system during the summer of 2000. A related web site is www.HMCS-Yukon.org. Wreck diving not only brings tourist monies into the site area helping to develop regional tourism, but it also provides excellent artificial reefs for various marine plant and animal species. There is a growing trend to sink vessels in such areas at the end of their useful service lives. The United States is a leader in the creation of recreational dive sites and artificial reefs through the utilization of intentionally sunk vessels. Australia recently sank a surplus navy destroyer that attracted eight thousand divers the first six months she was on the bottom.

25. *The Northlander,* 17 February 1998; and United States Embassy, Wellington, New Zealand, Defense and Naval Attaché Office.

26. The HMNZS *Tui* web site is www.divetui.co.nz.

CONFERENCE

NATHANIEL BOWDITCH AND THE ART AND SCIENCE OF NAVIGATION, 1802–2002

SALEM STATE COLLEGE

8–10 NOVEMBER 2002

The Bowditch Institute of Salem will celebrate the bicentennial of Nathaniel Bowditch's *The New American Practical Navigator* with a conference on the topic of "Nathaniel Bowditch: The Art and Science of Navigation, 1802–2002," to be held at Salem State College in Salem, Massachusetts, 8–10 November 2002. The conference will use Bowditch as a touchstone for exploring the state of the maritime sciences and commerce of his age, as well as the legacy of his contributions into the twenty-first century.

The conference will take place in historic Salem, Massachusetts, and will feature venues at the home of Nathaniel Bowditch (under restoration), the Peabody Essex Museum, the Salem Athenaeum, the Salem Maritime National Historic Site, and Salem State College. Attendant activities will include museum and historic site visits, including tours of the replica of the 1797 merchant vessel *Friendship*.

For more information, please contact Dr. Dane Morrison, Chair, Department of History, Salem State College, 352 Lafayette Street, Salem, Massachusetts 01970. His e-mail address is dane.morrison@salemstate.edu. His telephone number is (978) 542–7134. The Nathaniel Bowditch website is located at www.nathanielbowditch.org.

OBITUARY

DAVID BEERS QUINN (1909–2002)

David Quinn always said that, given the opportunity as a young scholar, he would have preferred to do his graduate work in geography or anthropology. When he went to King's College, London, to work on his doctorate under A. P. Newton, the Rhodes Professor of Imperial History, he originally had the idea of researching the careers of men who had been involved in projects for colonies in both Ireland and America. Newton advised him that it would be better to focus his dissertation on the administration of Ireland under the Early Tudors. In the end, all of David Quinn's interests came together in his long and outstanding scholarly career. He was the preeminent historian of the exploration, attempted colonization, and settlement of the Atlantic seaboard of North America in the sixteenth and early seventeenth centuries. Quinn's painstaking archival research recovered the documentation and reconstructed the record of many of these endeavors. His geographical training made that record intelligible, both through study and actual field reconnaissance of the environmental conditions that defined when and where ships could sail, and whether fledgling colonies could survive in their chosen location. His love of anthropology was manifested in his signal contributions to the ethnohistorical record of encounters between Englishmen and indigenous North Americans, as well as to the location and excavation of material remains of colonies ranging from Baffin Island to Florida. David Quinn's work first demonstrated the parallels and links between the English plantation of Ireland and their colonizing efforts in North America.

Born in Dublin, Ireland, on 24 April 1909, his early childhood years were spent in the village of Clara in King's County. His early education, from ages five to fourteen, took place in a one-teacher school. He credited himself with being fortunate in having parents who, without the advantage of higher education themselves, were well-read and did everything possible to encourage his intellectual development. When the family moved to Belfast in 1923, he entered the Royal Belfast Academical Institution, a highly respected day school. During his undergraduate years at Queen's University, Belfast, he was taught history by James Eadie Todd, whom he affectionately remembered as having a "formidable reputation for high standards and who drilled his students in them sternly if mercifully." A new lecturer, Estyn Evans, fostered his love of geography and introduced him to archaeology and ethnology. Moving to King's College, London, for his doctoral studies (1931–34), Quinn attended A. P. Newton's seminars on British imperial history. Although he was highly critical of many of the assumptions on which these studies were then conducted, he received a sound grounding in British colonial history.

Newton recommended him to his first academic post at University College, Southampton, in 1934. He taught there until 1939, when he was appointed to a lectureship at Queen's University, Belfast, with the responsibility of developing studies in Irish history. He remained there until 1944, apart from a brief six-month secondment to the BBC European Service in 1943. In 1944, at the age of thirty-five, he was appointed professor and head of the Department of History at University College, Swansea, part of the University of Wales. In 1957, he was appointed Andrew Geddes and John Rankin Professor of Modern History at the University of Liverpool, which chair he retained until his retirement in 1976.

David Quinn was only thirty-one when he published his two-volume study entitled *The Voyages and Colonising Enterprises of Sir Humphrey Gilbert* (2 vols., Hakluyt Society, second series, nos. 83–84 [1940]). He was to publish five more works with the Hakluyt Society over the next fifty years: *The Roanoke Voyages, 1584–1590* (2 vols., second series, nos. 104–5 [1955]); *Richard Hakluyt, The Principall Navigations, Voiages and Discoveries of the English Nation: A Facsimile of the Edition of 1589,* with R. A. Skelton and with an index by Alison Quinn (2 vols., extra series, 39 [1965]); *The Hakluyt Handbook* (2 vols., second series, nos. 144 and 145 [1974]); *The English New England Voyages, 1602–1608,* with Alison M. Quinn (2nd series, no. 161 [1983]); and *The Discourse of Western Planting,* with Alison M. Quinn (extra series, 45 [1993]). Since 1846, the Hakluyt Society has specialized in the publication of scholarly editions of voyages and travels, but David Quinn's first and subsequent editions set unrivalled scholarly standards for the transcription of manuscripts and the annotation of documents and early printed texts. In these volumes and in the innumerable articles that he published, Quinn demonstrated his brilliance at what he modestly described as "documentation and descriptive writing." He showed how the "chance rag-bag of survivals" that constitute the archives of early North American exploration and settlement could be pieced together into a coherent narrative by a combination of meticulously detailed research, which turned up documents where nobody else had thought to look for them, and an inspired flair for imaginative, but rigorously careful, reconstruction, where records could not be found. Perhaps the most notable example of this is his use of the John Day letter, first published by Louis-André Vigneras, combined with fragments of information about the fifteenth-century westward voyages of Bristol fishermen, to argue that the latter could well have been fishing off the Grand Banks over a decade before Columbus made his landfall in the Caribbean. This and all the other fruits of his scholarship were made accessible to the more general reader in works such as *North American Discovery, circa 1000–1612* (1971); *North America from First Discovery to Early Settlements: The Norse Voyages to 1612* (1977); *England's Sea Empire, 1550–1640* (1983); and compilations such as *England and the Discovery of North America, 1481–1620* (1974); and *Explorers and Colonies* (1990).

In 1987, H. G. Jones published *Raleigh and Quinn: The Explorer and His Boswell,* a compilation of papers read at the International Sir Walter Raleigh Conference at Chapel Hill, North Carolina. The title was extremely apt. Quinn's short volume on *Raleigh and the British Empire* (published in 1947 and enlarged in 1962 and 1973) remains the seminal comprehensive statement on Raleigh's colonial ventures. Raleigh's lost colony in North Carolina kept Quinn's interest until the last years of his life and was the subject of his two best works. The magisterial *Roanoke Voyages* was followed by the limited edition of *The American Drawings of John White* (with Paul Hulton, 1964), with its exquisite reproductions of the watercolors preserved in the British Library. In other more readily available volumes and numerous articles, Quinn fascinated his readers by his speculations that the abandoned settlers may well have lived peacefully among their indigenous neighbors for well over a decade after they lost contact with England.

Raleigh's activities in Ireland drew his particular attention, as did those of Sir Humphrey Gilbert and Edmund Spenser. In numerous articles, Quinn demonstrated that, although the English experience in planting Ireland was entirely different, nevertheless it stimulated late sixteenth-century Englishmen to develop theories about the nature and process of settlement that were later to be severely tested in the New World. His book *The Elizabethans and the Irish* (1966) also showed how the literary construction of the native Irish as the "other" promoted the process of their displacement by the English planters.

Asked by an interviewer in recent years to list those of his own "discoveries" of which he was particularly proud, Quinn replied that he found the identification and 1975 publication of Thomas Cavendish's personal testament and account of his last voyage (1586–88) to be "perhaps the most exciting thing I did," feeling that it revealed so much about the personality of the great explorer. This work, like his study of the pilot Simão Fernandes, his writings on Sebastian Cabot, on Martin Frobisher, and on Francis Drake's voyage of circumnavigation, as well as his contributions to evaluation of the Vinland Map and to the Roxburghe Club edition of Jean Rotz's *Boke of Idrography* (1981), all reflect his abiding interest in the history of navigation and cartography. He loved to regale his students with accounts of days spent under sail and the command of Samuel Eliot Morison, following in the wake of the English New England voyagers.

Although the main body of his work focused on English exploration and settlement of the New World, David Quinn was always careful to set it in the context of parallel French, Portuguese, and Spanish ventures. This is perhaps best seen in his five-volume *New American World: A Documentary History of North America to 1612* (with A. M. Quinn and S. Hillier, 1979). His international perspective was well recognized by his academic peers, and led to awards of research fellowships and visiting professorships in Canada, Hungary, New Zealand, and the United States. In the United States, he found a research home in the Folger, John Carter Brown, Newbury, and W. L. Clements Libraries. He formed close scholarly and personal attachments to the faculty and students at William and Mary and at St. Mary's College, Maryland. In the years immediately following his retirement from Liverpool, he spent several semesters at St. Mary's, teaching undergraduates and contributing to the project for the excavation of St. Mary's City. His scholarship won him many honors. He was presented with two festschrifts after his retirement: *The Westward Enterprise: English Activities in Ireland, the Atlantic and America, 1480–1650,* edited by K. R. Andrews, N. P. Canny, and P. E. H. Hair (1978), and *The European Outthrust and Encounter, The First Phase, c. 1400–c. 1700: Essays in Tribute to David Beers Quinn on His 85th Birthday,* edited by Cecil H. Clough and P. E. H. Hair (1994). Six universities in England, Northern Ireland, and the United States awarded him honorary degrees. He was appointed honorary vice president of the Royal Historical Society in 1983, honorary fellow of the British Academy in 1984, and an honorary member of the American Historical Association in 1986. He received the first John Carter Brown Library medal in 1996, the first fellowship awarded by the society for the history of discoveries in 2001 and, in that same year, the Cunningham Medal of the Royal Irish Academy for "outstanding contribution to scholarship and the life of the academy."

Everyone privileged to work with David Beers Quinn knew him as an immensely gifted man whose vast knowledge of his field was only exceeded by the generosity with which he shared it with others. He was a dear friend and never-failing mentor to his former students and to a huge international coterie of colleagues, maintaining correspondence with them until the last months of his life. These qualities were also found in his wife, Alison Moffat Quinn, who predeceased him in 1993. Their marriage in 1938 began a long partnership founded on enduring affection and a shared love of scholarship. Although David Quinn always felt that her early contribution to his publications did not receive the recognition it deserved, in later volumes this was amply rectified, and she achieved distinction and honors for her own research and impeccable indexes. As he said in 1986, "what I have done and what she has done have been so mixed that we can scarcely sort them out, but I could not possibly have covered so much ground without her help." Historians who have inherited the priceless legacy of his pioneering work can only be eternally grateful that he was able to do so.

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BOOK REVIEWS

ROGER C. SMITH, *The Maritime Heritage of the Cayman Islands.* Gainesville: University Press of Florida, 2000. xxii + 230 pages, 82 illustrations, bibliography, index. ISBN 0-81301-773-4. $49.95.

The Cayman Islands are known for off-shore banking, beaches, and scuba diving, but before the 1960s, they were better known as dangers to ships following the westerlies across the Caribbean toward the Yucatan Channel and for the sea turtles whose meat and shell they supplied to Jamaica and passing ships in the eighteenth and nineteenth centuries. The islanders' earlier maritime culture, like the crocodile-like reptile for which the islands are named, is extinct. This book seeks to record and share some of that lost culture. This is the first volume in a new series entitled New Perspectives on Maritime History and Nautical Archaeology. It is a splendid start. Roger C. Smith weaves together the geography, maritime history, material culture (boat types), and the nautical archaeology of these three small but strategically located Caribbean islands.

The Maritime Heritage of the Cayman Islands begins and ends with chapters describing the post-1978 nautical archaeology, oral history, and museum activities that seek to preserve the islands' now vanished maritime heritage. In between are three chapters, the first two of which detail the history of the islands (including shipwrecks, raids, and pirates) and the third outlining the turtling industry, which ceased in 1970. A rather lengthy chapter then describes the four major types of watercraft known to have been built on the island, with special attention to the cat boat, a local invention resembling New England whaleboats and Newfoundland dories. Wrecks representing some of the types are noted and briefly described. The penultimate chapter discusses famous wrecks on the islands' reefs, notably the Ten Sail wreck of 1794 and certain twentieth-century wrecks. The nautical archaeology of most of them is briefly described. All chapters are well illustrated with excellent photographs and the occasional map and line drawing (mostly of wrecks).

This book is based not only on nautical archaeology, oral history, and secondary sources but also on archival documents that Smith found in Great Britain, Jamaica, and Spain. The record thus compiled is far from complete but contains a number of well-told tales, some narrated more than once. The book is especially strong in its description of the geography of the islands and their reefs, how turtling was done, the boats used in that activity, and the stories of some wrecks. People are not so well covered, but they figure in the stories of wrecks and in the appendices, especially the third, which gives the first census of the island compiled in 1802. Yet, there are curious gaps. For example, slaves were quite numerous in 1802, but their roles in turtling and other activities are not discussed.

In sum, the reader will find much of interest in this well-researched, well-written, and well-illustrated work. It is a good, generally light read equipped with enough notes that the curious reader can go into greater depth if that is desired.

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RODERICH PTAK, *China's Seaborne Trade with South and Southeast Asia (1200–1750).* Brookfield: Ashgate, Variorum, 1999. 6″ x 9″, xii + 336 pages, 7 maps, index. ISBN 0-86078-776-1.

When approaching this book, the reader should be wary. If the expectation is that *China's Seaborne Trade with South and Southeast Asia* will yield a sustained narrative of 550 years of China's maritime and commercial development, the reader is destined for disappointment. If, however, the desire is for detailed bibliographical compilations and recapitulations of what the Chinese sources have to say about various ports, trade routes, and commodities, then the expectations may well be met. As a part of Variorum's Collected Studies Series, this book is composed of fourteen of Roderich Ptak's previously published essays, dating from the 1980s or early 1990s. Five are in German (and hence unable to be reviewed here owing to the fact that I do not read German), and nine are in English.

The format of the book is most off-putting. Through no fault of Ptak's, the series editor decided to reproduce the articles exactly as they appeared in the original sources and to retain their original typefaces and pagination. This means that the third article, "The Northern Trade Route to the Spice Islands: South China Sea—Sulu Zone—North Moluccas" (pages 27–56) follows "*Kurze Zusammenfassung der wichtigsten chinesischen Nachrichten zu den Sulu-Inseln wahrend der Ming-Zeit*" (pages 616–30). Further detracting from the sense of sustained narrative is the absence of specific introductions or prefaces that frame each of the pieces within a contextual setting or framework. Ptak himself has indicated that the articles are "not based on any theory or model," and hence "can be rated as philological notes" (page xi).

The articles in this book are broadly divided into two sections. The first, "Geography, Routes, and Regions," encompasses six articles on individual ports and regions throughout South and Southeast Asia. It includes discussion of such places as Timor, the southeast terminus of Chinese navigation in Indonesia; the Sulu archipelago, which controlled the passages to the Celebes Sea; the Nicobar and Andoman Islands; the Kayal area of south India; and the Maldive and Laccadive Islands. Whenever possible, Ptak has supplemented Chinese accounts from the Sung, Yuan, and Ming dynasties with information from Arabic and early European accounts. To my mind, the pieces focusing on specific places are more satisfying than those devoted to trade routes, where, for example, "The Northern Trade Route to the Spice Islands" digresses from a discussion of the route itself to the nature of China's clove trade.

The second section, "Commodities: Terminology, Production, Uses, and Trade," offers what Ptak has termed a "patchwork" of papers on such commodities as sandalwood, coral, tortoise shell, cloves, and horses. One of the most significant contributions here is Ptak's discovery that "different Chinese expressions for seemingly identical or similar objects of trade often referred to different varieties or quality grades" (page x). Many of these were high value commodities not widely traded to China or by Chinese. During the sixteenth and seventeenth centuries, sandalwood, which was produced in Timor, was less important than pepper, silk, or silver in the east-west trade. Nevertheless, as Malacca's entrepôt function yielded to Macassar, it, along with Macao, became the principal distribution centers for much of Asia. From the Sung to the Ming dynasties, tortoise shell was imported to China from Southeast Asia. During the Ming era, however, India's demand for the item increased to the point where Ptak speculates that after 1600, Europeans began to participate in its shipment from Indonesia to the Indian Ocean. This gave rise to a situation where, during the late sixteenth and early seventeenth centuries, the visible flow of the commodity was from east to west instead of the west to easterly flow that had prevailed during the Sung period. Cloves, like tortoise shell, came to China from various routes of Southeast Asia. The small volume of the trade, however, has caused Ptak to conclude that "China's demand for cloves had no significant impact on Southeast Asia's economic growth" (page 12).

In addition to the various Chinese dynastic histories, such as the *Ming Shih-lu,* Ptak has also made liberal use of Wang Ta-yuan's *Tao-I chih-lueh chiao-shih,* originally published in 1349, but reprinted under the editorship of Su Ch'i-ch'ing in Peking in 1981. In amassing this wealth of detailed information, Roderich Ptak has performed a service to the profession. However, the manner of presentation has clearly rendered this a book for specialists with a specific quest.

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ALEXANDER BOYD HAWES, *Off Soundings: Aspects of the Maritime History of Rhode Island.* Chevy Chase, Maryland: Posterity Press, 1999. xii + 324 pages, 35 illustrations, 5 maps, 2 tables, notes, index. Hardcover. 6″ x 9.5″. ISBN 1-88927-405-4.

Love of subject and love of place form the backbone of almost all history books. In this case, an amateur historian's love of subject and place compelled him to set out on a long path to write a much-needed commercial maritime history of Rhode Island. By beginning, even though late in life, he created a foundation first volume that might make any academic historian proud of the accomplishment.

The small Rhode Island village of Little Compton, where the late Alex Hawes (1906–95) refreshed in the summer and sailed his Cheoy Lee, the *Grand Turk,* is itself possessed of a colonial history that many a town might envy. There, on retirement from a half-century career as a Washington, D.C. attorney, Hawes found both the subject and the place to love, but his belated start prevented him from completing or publishing the fruits of his labor. What he left behind were "nearly polished drafts" of the material that became this book. Posterity Press turned over those drafts to Ingrid Hattendorf, an accomplished historian affiliated with the Newport Historical Society, who revised them and made some emendations to correct "apparent errors in citations and to reflect current scholarly conventions" (this goal is presented on page 266).

Off Soundings is a gathering of four essays, each on a broad topic of maritime history intimately connected with Rhode Island: piracy, privateering, slavery, and the Far East trade. Each is examined from a politically and economically regional point of view, albeit not without the overview necessary to place the details in context. As John Hattendorf remarks in his introduction, Hawes "wanted to do for the 'Ocean State' what [Samuel Eliot Morison] had done for the 'Bay State'" (page x). His work does begin to redress the imbalance that often subsumes Rhode Island affairs under the shadow of Salem, Boston, and New York.

Hawes has made his history out of particles and shreds, clipping small data from four centuries of legal, historical, and published anecdotal material, and he begins early. His story of piracy, for example, dates from 1679: he cannot have missed much that came earlier. There is the tacit collusion between the early colonial governors and the ship captains; there are the illicit voyages to far-distant shores such as Madagascar and the Comoro Islands; and there the recorded activities of William Kidd's colleagues, names that might have vanished in obscurity but for Hawes's careful piecework.

The chapter on the slave trade is perhaps the most illuminating because Hawes has conveyed a remarkable attention to the smallest details of what he (or perhaps Ms. Hattendorf) calls "this execrable commerce." At times, throughout, there is so much detail that the reader will be obliged to ring down one bell and a jingle, that is, dead-slow. This is history, make no mistake: where there are significant quotations, Hawes cites them. Where statistics will stand, he includes them, even though they can be a heavy haul such as we find on page 125: "Captain Caleb Godfrey, in the *Hare* in 1755, had to deal with 25 different sellers to assemble a cargo of 72 slaves. Captain Nehemiah Rhodes in the *Success* traded for six months on the African Coast, gathering only 43 slaves before he was wrecked on March 1, 1761.

Captain Esek Hopkins, commanding the brig *Sally* for the Browns of Providence in 1764–65, took nine months to gather a cargo of 196 slaves. Captain Tuell required seven months and three days to purchase a cargo of 92 slaves." The footnotes have been omitted, of course.

Transmitting a weight of statistical detail is the challenge of all good historians: one might argue that such numbers as these belong in an endnote, table, or appendix. In fact, Hawes has prepared an interesting table of the loading of certain Rhode Island slave vessels (pages 271–73). Yet, these numbers help to counteract the inclination of piracy historians to rely on faded accounts of yore, with their stereotypes, innuendo, and unsupported generalizations. The slavery business, as Hawes proves, was no occupation for risk-managers: the hazards of the trade were not associated solely with mid-Atlantic epidemics and mutinies.

Off Soundings is a scholarly work, and to call it so would have pleased Alex Hawes. For we who survive him, who have gotten along without a complete maritime history of Rhode Island, its publication is a boon. Whether he has done for "Little Rhody" what Morison did for Massachusetts is hardly the point. What he gave us is subject and place, and his dedication lays the proverbial cornerstone for those who must now complete the documentation of this often overlooked maritime colony and state.

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Alex Calder, Jonathan Lamb, and Bridget Orr, eds., *Voyages and Beaches: Pacific Encounters, 1769–1840.* Honolulu: University of Hawaii Press, 1999. viii + 344 pages. ISBN 0-82482-039-8. $45.00.

This volume of essays is based on papers presented to a symposium held in 1993 in Auckland, New Zealand. It is a welcome and valuable addition to the literature on the meetings of European travelers and Pacific islanders, and the immediate and long-term consequences of those meetings. Collectively, the chapters firmly and resolutely consign all simplistic "we and the other," "fatal impact," "general ruin of indigenous cultures by an imperial juggernaut," and similar traditional myths to the scrap heap of historiography. Instead, they offer interpretations that correctly emphasize the interactive elements in these meetings, the continuities rather than discontinuities in the articulation of the eras before and after mutual discovery, and the many inconsistencies in the history of the peoples of the Pacific Ocean that belie the stereotypic, generalizing, and patronizing views that have characterized much of the previous historiography.

To outsiders to Pacific (or "Oceanic") history, it may perhaps come as a surprise that these points need to be made as late as the latter part of the 1990s. It is true that Edward Said's *Orientalism* only appeared in 1978 and had little or nothing to say about the construction of "The Pacific" by European historians, but the debunking of "The Age of Vasco da Gama" in Asian history was already well under way by then. There is no more place for the "perpetrator and victim" or "sinner vs. noble savage" dichotomy. New paradigms are being applied, and, equally importantly, the Pacific peoples' voices are now being heard as well as those of Westerners and members of the Western settler/invader societies. Not only do many more diverse voices speak than ever before, but their subject itself is diversity, too. Again, one must wonder why such diversity must be stressed as novel and innovative, when even the "ordinary" holiday maker must be struck by the patent and profound differences between the social and cultural conditions of New Zealand, Tonga, Samoa (independent and American), Tahiti, and Hawaii.

None of these comments should be seen as criticism of this book. On the contrary, in its own diversity of authors, disciplines, themes, and approaches, *Voyages and Beaches* achieves what could and should already have happened about a generation earlier. It is most successful both in its structure and in the collective substance of its chapters—a fine example of the controversial genre of transdisciplinary area studies. By contrast to many publications of conference papers, Calder, Lamb, and Orr have provided a conceptual introduction of substantial length that effectively performs its twin functions of setting the conceptual and historiographical context for the volume and indicating where and how the individual chapters make their particular contribution. The task to "talk together" seventeen themes is never simple, but has been achieved with flair and conviction. The major purpose of the book, "to disclose the analogies, overlaps, and to-ings and fro-ings that entangle the Polynesian and European senses of the past" (page 1), is expressed rather quaintly, but the introduction is highly effective, and much of it could stand as an individual and thoughtful chapter.

Overall, while the geographical and thematic span of *Voyages and Beaches* is broad ranging, it possesses a greater internal cohesiveness than most collections of conference proceedings. Equally importantly, the quality of the chapters also has much higher and sustained standards of scholarship. The six years between the conference and publication have been well spent. Unfortunately, lack of space prevents all contributions to be reviewed here in the critical detail they all deserve—all the more a pity as hardly any chapter fails to push its subject further and thus to help cement the recent historiographical advances made in Oceanic history.

Not surprisingly, given the nationality and location of the conference organizers, a majority of chapters deals with New Zealand/Aotearoa history, both of first contact and subsequent Maori/Pakeha relations and their representations. Three excellent contributions are devoted to methodology involved in the main elements of cognitive problematics: myth and history; scientific observation; and subjective perceptions, representation, and the "construction" of both "the Other" and the Pacific. Several of these themes are explicitly taken up in individual case studies, too, set in New Zealand and (one each on the following areas) Samoa, Tonga, Tahiti, and Australia; surprisingly, no author deals specifically with a Hawaiian incident or issue.

The tone and quality of the volume is set by J. G. A. Pocock's sage and probing "Nature and History, Self and Other." This persuasively written chapter illuminates the implications of the (supposedly) fortuitous coincidence of the European revolution in thinking about the nature of history reaching a critical stage at the very moment of the mutual "discovery" of European travelers and Pacific peoples. The resulting questioning of the relationship, and soon also interaction, between representatives of these different civilizations underlies the greater part of the ensuing chapters. Malama Meleisea's brief but effective "The Postmodern Legacy of a Premodern Warrior Goddess in Modern Samoa" convincingly argues the case for a continuity in Samoa's pre- and post-missionary culture. Okusitino Mahina achieves the same purpose for Tonga in his "Myth and History," based on a sophisticated interpretation of the myth of the Turtle Sangone, as told in the poetry of Queen Salote. Incidents between James Cook and his crew and Maoris are carefully reconstructed and reassessed in chapters by Stephen Turner, Nicholas Thomas, and Ian G. Barber. The latter's "Early Contact Ethnography and Understanding: An Evaluation of the Cook Expeditionary Accounts of the Grass Cove Conflict" is a masterpiece of thoughtful post-Beaglehole revisionism. The chapter offers more proof of the benefits of the slow gestation period of *Voyages and Beaches,* as Barber could include a critical discussion of the 1993–95 Sahlins-Obeyesekere debate on the causes and meaning of Cook's death.

Another brilliant essay is Pat Hotepa's "My Musket, My Missionary, My Mana," proffering the perspective of the Ngapuhi Maoris of Aotearoa's North Island on Maori oceanic traveling and the arrival of successive European "discoverers," traders, and missionaries on their shores. The Ngapuhi response was anything but passive, with their leader Hongi not just using the missionaries to obtain modern weapons but even traveling to England to obtain funds and trading goods to finance further purchases of muskets in Sydney. The zenith of Hongi's mana was his bringing together of a large and powerful war fleet (over fifty canoes, a thousand muskets, and two thousand warriors and women) at Whangarei Harbor in 1821.

Two chapters offer contrasting but otherwise equally refined analyses of the meeting between Pakehas and Maoris. Leonard Bell discusses "Augustus Earle's The Meeting of the Artist and the Wounded Chief Hongi, Bay of Islands, New Zealand, 1827, and his Depiction of Other New Zealand Encounters. Contexts and Connections," in clinical historical fashion. Sarah Treadwell is more enchanted by post-modernist approaches in her "Categorical Weavings: European Representations of the Architecture of Hakari" (multi-story timber constructions erected on the occasion of major Maori feasts), a perceptive review spanning over fifty years of cross-cultural imagery. The last two chapters by Mark Houlahan and Margaret Mutu discuss the fundamental problematics of mediating between British and Maori culture through the translation of essential texts and concepts. These were, for the former, *Robinson Crusoe* and *The Pilgrim's Progress,* and for the latter the records of the land sales of the Muriwhenua area in the Far North from 1840 to 1865 that extinguished all reference to Maori title—which many generations and a sea change in ideology later, in 1997, was restored to the Muriwhenua people.

In sum, *Voyages and Beaches* is a powerful work of revisionism and a substantial contribution to scholarship. Emphasizing the importance of interaction and mutual influencing between travelers, settlers, and indigenous peoples, it also reinforces recently gained insights about the continuities and divergences in Pacific history. The importance of the book is no less great for maritime historians, whose field overlaps significantly with that of Pacific (or Oceanic) history. Readers of the *Neptune* might perhaps have wished for greater attention being devoted to the role of Americans in the new and complex web of interracial relations and representations, but the impact of *Voyages and Beaches* should extend to well beyond the boundaries of the beaches and seas it covers.

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JOAN DRUETT, *Rough Medicine: Surgeons at Sea in the Age of Sail.* New York: Routledge, 2000. x + 270 pages, illustrations, appendices, bibliography, index. ISBN 0-41592-451-0. $35.00.

British whaling ships were required by law to carry a surgeon. This led to efforts by captains to sign on newly qualified young surgeons for a voyage that would provide travel, adventure, and experience, as well as a share in the profits. A surgeon's share or lay varied considerably and was never larger than a ninety-fifth, or less than that of a carpenter. After such a cruise, the surgeon would usually enter into private practice and get married. Accounts of whaling voyages between 1829 and 1832 that were left by ten British surgeons are the basis of this book. These are supplemented by a journal for the years between 1837 and 1840 and a partial diary from 1855 of a Nantucket surgeon that provides an American perspective on later times.

Joan Druett is a New Zealand social historian whose labors were assisted at various points by specialists in medicine, medical history, pharmacology, and herbs. During these voyages, the surgeon was not allowed to focus exclusively on his particular specialty but was expected to participate in the working of the ship. Such duties might include everything from scrubbing decks, rowing a boat, standing watch, participating in the whale hunt, acting as a ship's clerk or purser, and controlling the ship in the absence or illness of the captain. Such varied duties resulted in written impressions by educated observers of virtually all aspects of a whaling voyage, including the common health problems of whalemen. These ranged from such things as bad teeth, lice, worms, inflammation of the testicles, diarrhea, chronic dysentery, hernia, hepatitis, rheumatism, liver disease, syphilis, tuberculosis, pneumonia, and insanity. Amputations, bloodletting, and blistering are also discussed. In addition, there were problems associated with drunkenness and fighting. We also get insights into the erroneous notions of some doctors on the prevention and treatment of scurvy.

The opening chapter provides background information on the state of medical knowledge in the early part of the nineteenth century, followed by a discussion of the contents of the medical chest and how various items were used to treat patients. Succeeding chapters deal with day-to-day life on a whaler during the first leg of a voyage, the whale hunt, accidents, injuries, ailments, the treatment of scurvy, encounters with native peoples, and troubles between captains and crews. On the latter point, Druett states that, near the end of a voyage, it was a common practice for some captains to harass their men so that they would desert and thus lose their share of the profits. A final chapter explores the subsequent careers and fates of the surgeons after their whaling days. All in all, the book is an intriguing description of the life, work, and hazards of those who engaged in whaling. Its value is further enhanced by appendices that provide a glossary of terms, a comparison of the contents of medical chests in 1617 and 1837, and a patient list from an American whaler that includes ailments and treatments. There remains, however, the question of how much the adventures of ten British surgeons can be said to reflect the experiences of all the medical men who were involved in whaling. In the absence of other sources, we must acknowledge that this work presents the best information that is currently available.

HAROLD D. LANGLEY
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FRANK MACKEY, *Steamboat Connections: Montreal to Upper Canada, 1816–1843*. Montreal and Kingston: McGill–Queen's University Press, 2000. xix + 383 pages, 26 illustrations, 5 appendices, bibliography, notes, index. Hardcover. 6″ x 9″. ISBN 0-77352-055-4. $44.95.

This is, in a number of respects, a quite remarkable publication. It has all the earmarks of a serious scholarly monograph: sixteen pages of index, twenty pages of bibliography (much of it manuscript and contemporary sources), 132 pages of notes, and twelve pages of appendices. If one subtracts the front matter, the narrative is delivered in roughly half the page count. In times when even scholarly presses are looking for ways to trim back the length of volumes, McGill-Queen's is to be congratulated for not compromising here.

The period and region that Frank Mackey covers is largely *terra incognita* from the point of view of maritime history. The recent survey by Camu, *Le Saint-Laurent et les Grand Lacs,* covers the material here at a very high level. Tulchinsky's *The River Barons* covers only the latter years of this volume, and the other historiography is largely that of periodical literature, a brilliant forty-year-old M.A. thesis, and some commissioned reports for Parks Canada.

Despite all the academic apparatus, this is not at its heart an academic work. Mackey aims "to trace the beginnings of steam navigation on the upper St. Lawrence and lower Ottawa rivers." He further claims "it is not an analysis of that traffic; nor is it a thesis or treatise on transport economics, shipbuilding, steam technology, early canals, or colonial trade. It is a narrative account, arranged chronologically and spanning slightly more than a quarter century" (page ix). On this level, it succeeds very well.

Mackey pursues the stories of the owners, shipwrights, engine builders, and captains. What emerges is a story that Tulchinsky could tell only in part: the domination of Montreal's upriver transportation in the wake of the War of 1812 by American immigrants. The story is dominated by Horace Dickinson of Hatfield, Massachusetts, who immediately after the war, and while still a resident of the United States, contracted with his brother Barnabas for the transport of the Royal Mail between Montreal and Kingston. From this came a winter stage line and a summer stage-and-steamboat line. On the unimproved St. Lawrence River, the steamboats ran between the rapids. A series of short stage rides bypassed the worst sections of the river. The story is carried forward until the route is rivaled by vessels running up the Ottawa River and down the Rideau Canal.

Initially, Mackey says he was drawn to a steamboat featured in one incident in the Lower Canadian rebellions. Despite this, the incident is treated in only one chapter, and then as part of the larger implications for the American community in British North America in the unsettled times in the late 1830s of which the hysteria surrounding the rebellions was only one part.

A number of illustrations and a couple of well-executed maps complete the volume. It is to be regretted that the color reproductions of some of these could not be made, but the paper is not well suited to continuous tone images. The research is outstanding. If there were, in fact, stones unturned in shaping this narrative, no one else has looked under them either.

In summary, Mackey's *Steamboat Connections* is an extraordinary achievement and worthy of a place of honor in the history of early North American steam navigation.

WALTER LEWIS
Acton, Ontario

WILLIAM HENRY FLAYHART III, *The American Line, 1871–1902*. New York: W. W. Norton, 2000. xii + 392 pages, 243 illustrations, of which 45 are in full color, bibliography, notes, index. Hardcover. 8.5″ x 10.25″. ISBN 0-39304-710-5. $39.95.

In *The American Line, 1871–1902,* Dr. Flayhart has undertaken the rather daunting task of compiling an integrated history of no fewer than five North Atlantic steamship operations. The first six chapters follow the histories of the American Steamship Company of Philadelphia and the Red Cross Line, which combined in 1884, and the Inman Steamship Company, which was added to the collective in 1886. The balance of the text describes the combine's subsequent establishment of the American Line, its trials, triumphs, and subsequent slide into oblivion, under the management of J. P. Morgan's North Atlantic shipping trust.

Although the actual subject matter has been well researched, one gets the impression that some related areas have been ignored. For example, in the rather brief foreword, Flayhart asserts that the American merchant marine had fallen into "a sharp, steady decline" since the Civil War. In actual fact, although no large North Atlantic liners were being built, American capital was still invested in the eight hundred thousand tons of shipping that had sought refuge in foreign registry during the Civil War, and coastal lines were rapidly making good on their war losses. In addition, the Pacific Mail Line had launched four huge new liners, and Charles Morgan added no fewer than eight new iron steamers to his fleet between 1865 and 1867.

As far as the general organization and presentation of information is concerned, while the division of the text into individual parts for each company might have been a more practical solution, the author has still managed to achieve a considerable degree of success in tying everything together. Even Dr. Flayhart's somewhat obsessive recordings of the minutiae of boardroom machinations fails to detract from his overall accomplishment, as they are interspersed with some truly great sea stories. Highlights among the latter are Cornelius L. Brady's single-handed rescue of the *Philadelphia* and the carnival-like atmosphere during the salvage of the *St. Paul* off East Branch, New Jersey. The story of the four big American Line vessels during the Spanish-American War is another great yarn, even though it covers some previous ground and appears to be a reprint of Flayhart's previously published "Four Fighting Ladies."

Unfortunately, the final chapter is inconclusive, and, as a result, one is left completely in the dark as to the actual fate of both the American Line vessels and others mentioned in the text. The provision of fleet lists, which no book of this nature should be without, would have provided at least a partial solution to the problem.

The American Line is copiously illustrated with photographs, reproductions of prints, plans, tables, and other ephemera. However, they are unlisted and many of them are without credits. Editing problems also show up in the number of geographical errors and the use of improper nautical terminology appears not only in some of the captions, but also in the text. For example, we find Halifax, Nova Scotia, relocated to somewhere northeast of Newfoundland, and Barrow-in-Furness moved to Scotland. Yards are referred to as "cross bars," and steam vented from a rear exhaust pipe is misinterpreted as coming from a ship's horn. Minor errors can also be found among the many references to United Kingdom shipbuilding companies. However, apart from locating the wreck of the *Ohio* "off the coast of Alaska," rather than on Carter Beach, British Columbia, there do not appear to be any major problems.

All in all, given the subject matter, listed source material, and wonderful illustrations, *The American Line* had the potential to become a classic. Unfortunately, this otherwise impressive book has some basic problems with its design, composition, and content. For example, preliminary sections are not numbered in small Roman numerals, as is customary, and Chapter 1 begins at page 15. When added to the aforementioned omission and the accumulation of small errors, this tends to erode one's confidence in the work as a reliable resource.

On the other hand, there can be no doubt that Dr. Flayhart has provided us with a fascinating in-depth study of the people and politics behind the rise and fall of the American Line and, in any event, most readers will enjoy the book for its great sea stories and dozens of superb steamship photographs.

ROBIN H. WYLLIE
East LaHave, Nova Scotia

T. H. BAUGHMAN, *Pilgrims on the Ice: Robert Falcon Scott's First Antarctic Expedition.* Lincoln: University of Nebraska Press, 1999. xv + 334 pages, maps, illustrations, notes, bibliography, index. Hardcover. ISBN 0-80321-289-5. $50.00.

Robert Falcon Scott (1868–1912) has assumed heroic proportions in Antarctic exploration, along with Ernest Shackleton and the Norwegian Roald Amundsen. The public's opinion about Scott has largely hinged on the events of his final expedition of 1911 and 1912, when Scott perished with many of his companions, and on the debate about what his party had accomplished.

T. H. Baughman presents another Scott: that of the *Discovery* expedition between 1901 and 1904, Scott's first Antarctic expedition. Through this venue, Baughman examines Scott as man and as commander when he was first plucked from obscurity and placed on the international stage. This is not a biography of Scott so much as it is a study of how the expedition was organized and run and of the interactions between Scott and the officers and men of the *Discovery*.

In many ways, the protagonist of the story is Sir Clements Markham, who proposed the idea of a British national Antarctic expedition as early as 1893 and championed it before the Royal Geographical Society, the Royal Society, and the British government. Markham shaped a command structure that, under the Royal Navy, favored exploration over a more scientific focus for the expedition. He selected Scott as commander, steered the design and construction of the ship *Discovery,* and influenced many other issues, including the much-discussed one of whether sled dogs should be used for transport (which Markham opposed).

The *Discovery* expedition had five goals: to gather data on terrestrial magnetism in order to improve navigation, to conduct meteorological studies, to gather information about tides, to study Antarctic glaciology, and to advance geographical discovery. It was in the formulation and pursuit of these goals that the struggles between those favoring exploration and those favoring science evolved. Markham's influence remained strong throughout the voyage. For example, his fear about leaving a shore party to winter over in 1902 under a scientific director while the *Discovery* explored adjacent waters led him to instruct Scott to forego hopes for a voyage of geographic discovery in favor of having the ship winter over in McMurdo Sound, thus keeping all hands under naval (Scott's) direct command. However, Scott himself soon began to demonstrate increasing scientific interests that shaped what would become the eventual accomplishments of the expedition.

The summer of 1902/3 was spent exploring overland to the south. Unable to extricate the *Discovery* from the ice, the crew wintered over again in 1903, after receiving supplies across the ice from a relief vessel. Exploration and studies continued the next summer. The British government agreed to help with a second resupply effort for 1903/4, at the price of taking control of the expedition from Markham and the two societies. The whaling barque *Terra Nova*—in which Scott was to return to Antarctica on his second expedition—was purchased, fitted out, and became part of a two-ship rescue effort. In January 1904, the rescuers were separated from the *Discovery* by eighteen miles of ice, which they succeeded in penetrating after only six weeks of grueling work.

That the scientific accomplishments of the first Scott expedition were limited principally by the constraints imposed by Sir Clements Markham is made clear by Baughman. It is apparent that Scott increased the scientific value of the expedition by encouraging studies in Antarctic biology and other fields that Markham would have opposed, but, because of Markham's constraints or other reasons, Scott does not emerge as a great leader in this book. Baughman lays out many reasons for the expedition's limited accomplishments both in science and in exploration—including the narrowly defined goals, disputes between the two sponsoring societies, the reluctance of the government to become more fully involved early on, the limitations of the *Discovery* as an ice vessel, the conservatism of the Royal Navy, and the choice of Scott as commander. However, he argues that the *Discovery* expedition trained all of the principal British characters involved in Antarctica during the period and, for that reason alone, both the expedition and Scott's leadership should be considered successful.

Baughman presents the story concisely and clearly. He has worked extensively in the primary sources and brings out new evidence about the expedition and its participants. He then allows that evidence and the drama of the story itself to carry the reader along. *Pilgrims on the Ice* is a solid contribution to the history of Antarctic discovery.

E. Jeffrey Stann
Chevy Chase, Maryland

Al Miller, *Tin Stackers: The History of the Pittsburgh Steamship Company.* Detroit: Wayne State University Press, 1999. 349 pages, 50 photographs, 4 appendices, bibliography. 6.25″ x 9.25″. ISBN 0-81432-832-6. $34.95.

This much-needed history of the Pittsburgh Steamship Company, a subsidiary of the U.S. Steel Corporation, details the activities of the men and vessels of the major shipping line operating in the Great Lakes bulk-carrying trades. In chronological order, Al Miller covers the major events that affected the fleet and Great Lakes transportation generally. There is considerable discussion of leading company officials who played prominent roles in the formation, development, and day-to-day operation of the firm. Ordinary sailors and dock workers are not forgotten either; their triumphs and defeats are documented in detail. The author chronicles the changes in the fleet in terms of sizes and types of vessels, the introduction and impact of new technology on ship and shore, the growth and changes in new materials hauled as market conditions changed, and transformations in the corporate structure itself. As Miller notes, "the fleet has evolved from a 'link in the chain' of a steelmaking giant to an independent company in the efficiency-crazed 1990s. In many ways, the path of the Pittsburgh Steamship Company exemplifies the course that American industry has taken in the twentieth century, and its story offers the clearest glimpse into the romance and hard-nosed realities of Great Lakes shipping" (page 14).

Good and bad times and many topics are covered in this story: new records set for tonnage hauled; new safety records achieved in a shipping season; developments in the taconite industry; improvements in onboard living for officers and crews; increases in wages and bonuses and shorter work hours for sailors; destructive weather conditions on the lakes; occasional labor disputes and strikes; human tragedies of various sorts; difficult rescue operations, especially late in the shipping season; environmental problems, including those from an extended shipping season; ship repairs and refitting; and the occasional wretched working conditions for crews on board ships.

The impact of prosperity, recessions and depressions are recounted as they affected the Pittsburgh fleet and its employers, Great Lakes transportation, and the iron and steel industry generally. In short, Miller describes how this firm remained successful for a century, even though it is no longer the largest fleet on the Great Lakes. As he convincingly maintains, it is a "survivor" (page 260) when many other fleets folded.

The text is divided into eleven chapters, with all but one given an appropriate title as to its contents. For some reason, chapter six, "The Roaring Twenties," has little to do with the 1920s; most of the chapter details the effects of the Great Depression on Great Lakes transportation and the Pittsburgh Steamship Company. In my view, several chapters stand out: chapter one recounts the history and early developments of the iron and steel industry, iron-mining in the Great Lakes region, and the development of fleets to serve the industry. Important individuals such as Andrew Carnegie, John D. Rockefeller, Henry W. Oliver, Charles Schwab, Elbert H. Gary, and J. P. Morgan are featured. In chapter three, the career of Harry Coulby, long-time head of the Pittsburgh Steamship Company, is covered on his challenges to the leadership of the Lake Carriers' Association, his efforts to prevent unionization of crews, and his work to extend and modernize the Tin Stackers fleet. Chapter eight, entitled "A Billion Tons of Ore," points to a half-century of success of the Pittsburgh fleet. Yet, changes were in the making. The fleet had become a subsidiary of U.S. Steel Corporation. The development of taconite ore was progressing, strikes against U.S. Steel had brought about unionization, and new communications devices were installed in the fleet. The final chapter details corporate changes (including name changes) in the fleet. U.S. Steel sold its transportation companies—the Great Lakes fleet and ore-hauling railroads—resulting in an independently owned fleet. As a result, the emphasis becomes profit-making instead of cost-containment.

Overall, this is a very readable account of a century of change within the Pittsburgh Steamship Company. Mr. Miller maintains the interest of the reader by emphasizing the human element in this story. He places the Pittsburgh fleet in the wider context of Great Lakes transportation. In short, academics and casual readers would enjoy this book. The major problem for business historians is the very limited coverage of the financial side of the enterprise. Note should also be made of the excellent photographs that are spaced throughout the text and the helpful appendices that contain relevant details on the Tin Stacker vessels.

JEROME K. LAURENT
University of Wisconsin-Whitewater

ERIC C. B. LEE, COMP., *The Cruiser Experience: Life Aboard Royal Navy Cruisers during World War Two.* Fleet Hargate, Lincolnshire: Arcturus Press, 2000. 207 pages. ISBN 0-90732-273-5. £14.95 sterling + surface mail, £1.50 airmail; North America £3.35

Mountbatten's 1939 encomium to the men of HMS *Kelly* maintaining that "You cannot have an efficient ship unless you have a happy ship" is, thanks to Noel Coward, perhaps the Second World War's most memorable statement about service in the Royal Navy. As we learn in *The Cruiser Experience* from Sub-Lieutenant E. R. Wilkinson, a happy ship was "an elusive concept" that could only come out of the privations, dangers, and hardships shared by the crew.

The fifty men whose reminiscences are included in this book range from "for the duration" ratings to Royal Marine bandsmen, an RNAS pilot, and a VC-decorated commander. Individually, their stories allow readers to glean this shared "cruiser experience." Rarely was service in these ships "happy" in even the broadest definition of the word. Cruisers were overcrowded, ill-ventilated, uninsulated ships unsuited for either tropical heat or North Atlantic ice. Rarely spoken of explicitly in this volume, "friendship" seems to have been as illusory as happiness, because chronic manpower shortages meant that, if a ship put in for repairs, its crew would likely be dispersed to other vessels. Nevertheless, "comradeship" was developed through shared fear, risk, interminable action stations, seemingly unending air and sea attack, sinkings, or, most movingly, clearing the charnel detritus of battle. Although risk and hardship predominate in these memoirs, the joys of boozing, concerts, and cards clearly also helped crews to bond together. The cumulative effect of these memoirs makes it abundantly clear that the men who sailed in cruisers believed in the unique nature of their service and, therefore, of their stories.

Because it is not always easy to perceive the essence of cruiser experience in these pages, this book is guilty of some of the vices of amateur history. Although Wilkinson's comment invites it, the memoirs have not been edited in such a way as to emphasize particular themes. Memoirs are simply grouped by ship. A brief introduction summarizes the history of cruisers and their roles in the war but fails to guide readers toward an experiential understanding of service. The absences of both conclusion and index further impede any readers who wish to explore the book thematically. Likewise, the book is comprehensively illustrated with photographs of individual ships, when scenes of shipboard life would better illuminate incidents and stories. Finally, too little biographical information is provided about individual narrators. Though memoirs drawn from previously published material are acknowledged, there is no indication about how or when most of these reminiscences were collected. These last are the most troublous omissions for scholars, who bring separate critical approaches to evidence collected orally, in letters or diaries, contemporaneously with the actions described or after many years of embellishment in the mess and in the legion.

Even if its structure does little to uncover the cruiser experience, this book still exhibits some of the virtues to which amateur history is prone. Although one cannot be certain, the passages in this book do not appear to have been pruned extensively. This allows individual voices—confessional, conversational, prosaic, apologetic, and nostalgic—to resonate clearly from these pages. The varied pitches of individual speech and the intimate nature of these stories preclude a unified narrative, making this short book somewhat difficult to digest at one sitting. However, because each narrator emphasizes different, personal aspects of a common undertaking, the "cruiser experience" emerges page by page. This is the book's real achievement. By deciding not to turn these reminiscences into a thematic collage, the editor has provided scholars with a useful resource on which to draw for cultural and experiential accounts of naval service.

In these pages, the "cruiser experience" is not so elusive as Wilkinson's happy ship, but the reader is left to discover its essence. This is not without reward, because the task is often as moving as it is challenging.

Andrew Horrall
National Archives of Canada

Richard F. Newcomb, *Abandon Ship!: The Saga of the U.S.S.* Indianapolis, *the Navy's Greatest Sea Disaster.* With an introduction and afterword by Peter Maas. New York: Harper Collins, 2001. xvii + 326, 8 plates, 1 map, glossary, index. Hardcover. 5″ x 9″. ISBN 0-06018-471-x. $25.00.

Captain Charles Butler McVay III, commanding officer of the heavy cruiser *Indianapolis,* had orders to zigzag if he felt it were necessary. It was so dark that night in the Pacific that her officers could not see from the bridge to her bow. Surely no enemy submarine could see her. So Captain McVay gave orders to secure from zigzag, and *Indianapolis* ran straight and true toward *Leyte,* 550 miles to the west. About 11:30 on 29 July 1945, the clouds parted and the Japanese submarine I-58 surfaced five miles in front of *Indianapolis.* Silhouetted against the moon, *Indianapolis* was an easy target as she headed toward I-58. At 12:02 a.m., two Japanese torpedoes ripped *Indianapolis* apart. Thirteen minutes later, she sank taking a quarter of her crew with her, while around nine hundred men made it into the water before she sank. Although the survivors expected to be rescued in hours or perhaps a day, the first rescue did not take place until four and a half days later. By then, exposure and sharks left only 316 survivors.

How a series of almost random events led to this disaster was the subject of naval veteran and journalist Richard Newcomb's history published in 1958 and reissued in this edition. By meticulously going through naval records and conducting extensive oral history interviews with survivors, Newcomb spins a vivid yarn of events leading up to and immediately following the sinking of *Indianapolis.* It was a good story in 1958, and it is a good story today.

Newcomb then moves on to the next section of his book, the court martial of Captain McVay. Though tempered in language and judicious in his use of evidence, it is clear that Newcomb thinks there was no legitimate basis for court martialing McVay. The fault was not McVay's for refusing to zigzag but with naval intelligence for failing to inform him that there was submarine activity in the waters through which he would pass. The navy proceeded with the court martial, found McVay negligent in his failure to zigzag, gave him the smallest penalty possible, then set aside even this small penalty, but the conviction remained. Had the court martial exonerated McVay, he might have been able to salvage his career, although Newcomb believes that the sinking of the *Indianapolis* was enough to prevent McVay from ever getting another command. There was no chance for promotion of an officer with a court martial conviction on his record, even if it were an injustice. McVay served in administrative positions for the next two and half years and retired from the navy at the age of fifty-one.

It is this "injustice" to McVay that prompts this new edition. McVay's champions, bolstered by evidence that naval intelligence had deliberately withheld critical information regarding Japanese submarine activity in the area, managed to get a congressional hearing in 1999 and a joint congressional resolution recognizing McVay's lack of culpability. Abandoning the judicious tone and meticulous research that reflects Newcomb's text, Peter Maas recounts these most recent events in an introduction and postscript that does not strengthen the volume.

The problem is that the story of the *Indianapolis* disaster is far more than the fate of Captain McVay. Newcomb realized this in 1958; the larger historical question was not the court martial of Captain McVay but whether the navy department in 1945 was to blame the system or blame individuals. The navy decided, not surprisingly, to blame individuals and singled out four naval officers for responsibility in the *Indianapolis* disaster. McVay was not one of these officers; he was just collateral damage. Though he recognized the importance of the issue, Newcomb did not believe he could decipher how these decisions were arrived at within the navy department. After all these years, what we need is not more on McVay but an explanation of what really happened within the navy department. Because this volume does not do that, it does not take our understanding of the *Indianapolis* disaster beyond where we were in 1958.

JONATHAN UTLEY
Chicago, Illinois

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SHORTER NOTICES

by Briton C. Busch

JUSTIN M. RUHGE, *Maritime Tragedies on the Santa Barbara Channel: A History of Shipwrecks in Fog and Storms from Point Sal to Point Mugu.* Goleta, Calif.: Quantum Imaging (Post Office Box 8216, Goleta Calif. 93118), 2000. 266 pages, illustrations, maps, bibliography. Softcover. ISBN 0-961480-710-01. $17.95 (+ $3.00 postage).

The coast of the Santa Barbara Channel, including Santa Barbara, Ventura, and San Luis Obispo Counties, has long been a famous "graveyard of ships" as a result of strong currents, variable winds, dense fogs, and the dangers presented by the several Channel Islands. Justin Ruhge, an expert on the local history of the area, here gives such details as are known of roughly one hundred wrecks in these waters from 1815 to 2000, adding photographs, charts, and other material where applicable. This is an essential volume for California maritime history collections.

D. K. BROWN, *"Nelson" to "Vanguard": Warship Design and Development, 1923–1945.* Annapolis: Naval Institute Press, 2000. 224 pages, illustrations, appendices, index. Hardcover. ISBN 1-55750-492-x. $59.95.

David Brown retired in 1988 as the Royal Navy's deputy chief naval architect and embarked on a second career as a naval historian. In his new volume, following a general introduction, he provides details on design and construction of British vessels in the period indicated, dividing his subject into chapters on the various vessel types from battleships and fleet carriers down to escorts and miscellaneous vessels, adding further information on modernizations, updates, scrapping, wartime damage, and concluding with an essay on "what is good design?" Altogether, the volume is a vast compendium of much technical detail, and yet it is written in a clear and readable style that connects the problems of construction to mundane but crucial issues such as treaty tonnage limitations or financial constraints. Readers familiar with Brown's other books will not be surprised to learn that *"Nelson" to "Vanguard"* is an essential reference volume on the mid-twentieth-century Royal Navy.

BARRY M. GOUGH, *HMCS* Haida: *Battle Ensign Flying.* St. Catharines, Ontario: Vanwell Publishing, 2001. 260 pages, illustrations (b/w and color), maps, appendices, bibliography, index. Hardcover. ISBN 1-55125-058-6. $50.00 Canadian.

Any book by *American Neptune* editor in chief and eminent naval and maritime historian Barry Gough is an event worthy of note in these pages, but this new study of Canada's famous *Tribal*-class destroyer is well worth attention for two additional reasons. First of all, *Haida* was Canada's most decorated warship, serving in World War II in the Arctic, the English Channel, Normandy, the Bay of Biscay, and then in the Korean War. She was eventually decommissioned in 1963 but is still doing duty as a museum ship and library in Toronto. Secondly, this is a most handsome, well-produced, and oversized (8.5″ x 11″) volume, with numerous illustrations, including a delightful section of color reproductions of paintings. Professor Gough has based his account on the official records in Ottawa and London, in addition to numerous secondary sources. Overall, this is an impressive accomplishment that no doubt will encourage readers to join the non-profit Friends of HMCS *Haida;* part of the proceeds of the book will go to support this worthy cause.

GERHARD SIMONSEN, *Verschollen im Nordatlantik: Der Rätselhafte Untergang des Deutschen LASH-Carriers* München. Hamburg: Convent Verlag, 2000. 137 pages, illustrations. Hardcover. ISBN 3-93461-305-5. DM 68 or 34,90 Euro.

The thirty-seven-thousand-ton LASH-carrier ("Lighter Aboard Ship") *München,* operated by the Combi line, a joint venture of Hapag-Lloyd and Holland Amerika, was designed to carry eighty-three seagoing barges, much like floating containers, which were loaded from the stern by the ship's self-contained giant crane. In 1978, the *München* was a state-of-the art, six-year-old vessel in top condition, but in December of that year disappeared virtually without a trace in a ferocious North Atlantic storm (*Jahrhundert-wetter*). A few oil slicks and, eventually, a damaged lifeboat were all that were ever found; twenty-eight officers and men had vanished with the ship. Gerhard Simonsen, a retired Hapag official, tracks the disaster and speculates on its causes. The volume, with German text throughout, is enhanced by numerous photographs, including an extensive (pre-disaster) collection of color views.

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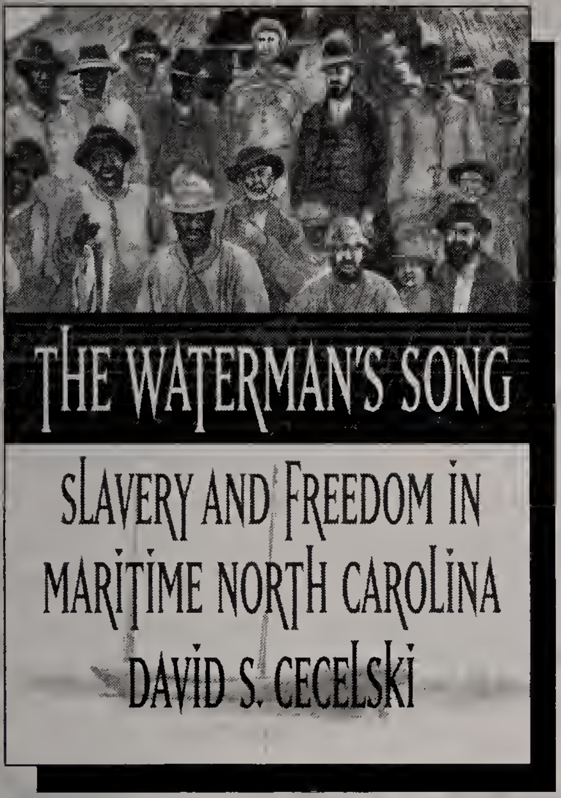

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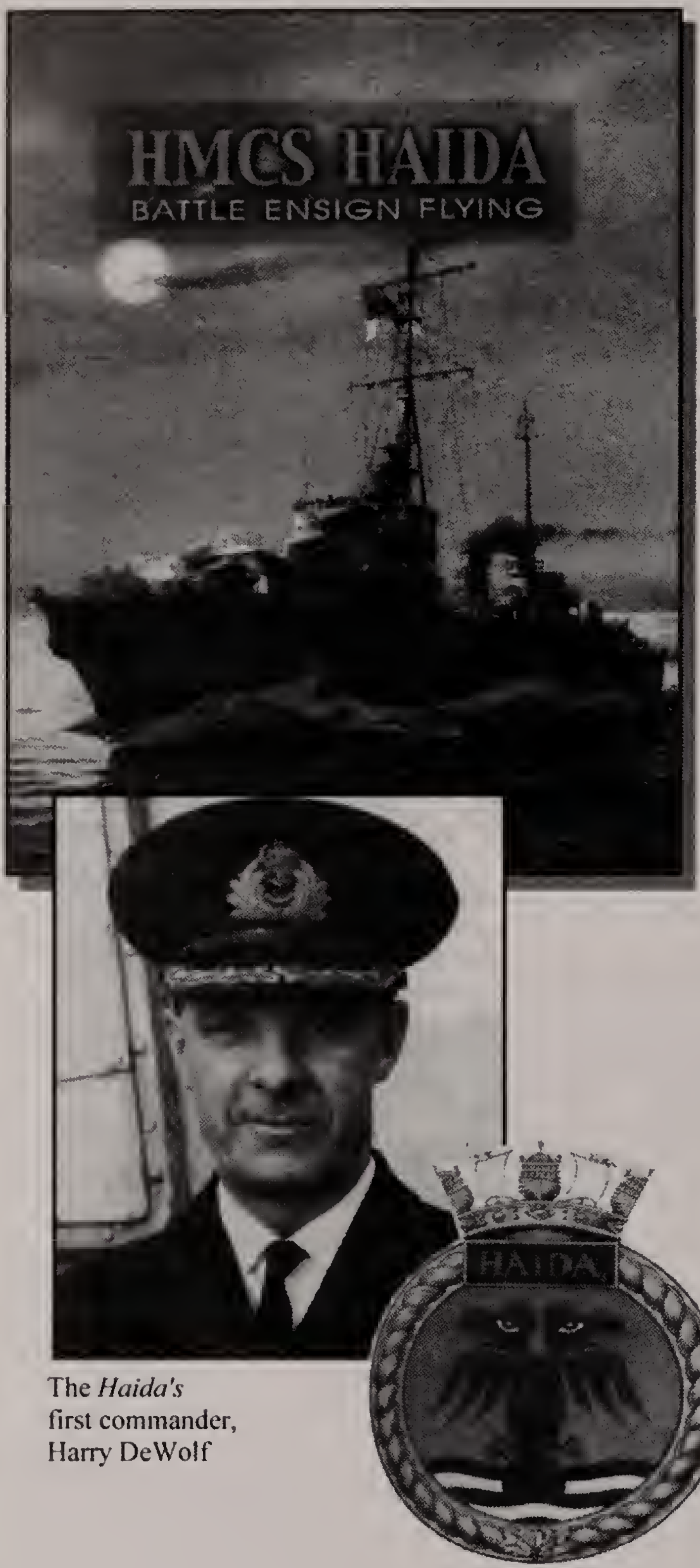

The *Haida's* first commander, Harry DeWolf

HMCS HAIDA: BATTLE ENSIGN FLYING

Barry M. Gough

This is the history of Canada's greatest warship, the aggressive and heroic HMCS *Haida*. In this informative new book, Dr. Barry Gough, a distinguished historian, performs an invaluable service to Canadian history as he documents the life and times of this legendary vessel.

Through meticulous research and over one hundred photographs, drawings and maps, the author has created a book that is equal to the majesty of the *Haida* herself. Its pages contain an exciting story of courage, teamwork and mechanical ingenuity that is sure to attract both naval enthusiasts and those who wish to take one last tour on the *Haida's* decks.

Throughout her distinguished career, *Haida* was responsible for sinking more enemy tonnage than any other Canadian vessel. The *Haida's* first commander, Harry DeWolf is Canada's most famous and decorated naval hero. The ship's story is told against a world of complex forces and struggles that allows the reader insight into the trials and ultimate triumphs of this great warship.

In 1963, *Haida* was retired from active service and was saved by a group of citizens who realized her importance. Now a naval museum in Toronto, Ontario, the *Haida* is the last floating Tribal class destroyer of the Second World War, and Canada's largest historical artifact. She attracts many visitors each year as people come to share in the wonder and pride of this national landmark. At present, the *Friends of the Haida* are campaigning to raise funds to refit the ship and ensure its future survival.

Author Information: Dr. Barry Gough is the author of numerous books on naval and military history. He has been awarded several distinctions for his contributions to historical literature and is past president of The Canadian Nautical Research Society. Dr. Gough is a professor of history at Wilfrid Laurier University in Waterloo. He has generously donated all of his earnings from this book to *Friends of the Haida*, to support preservation of the ship.

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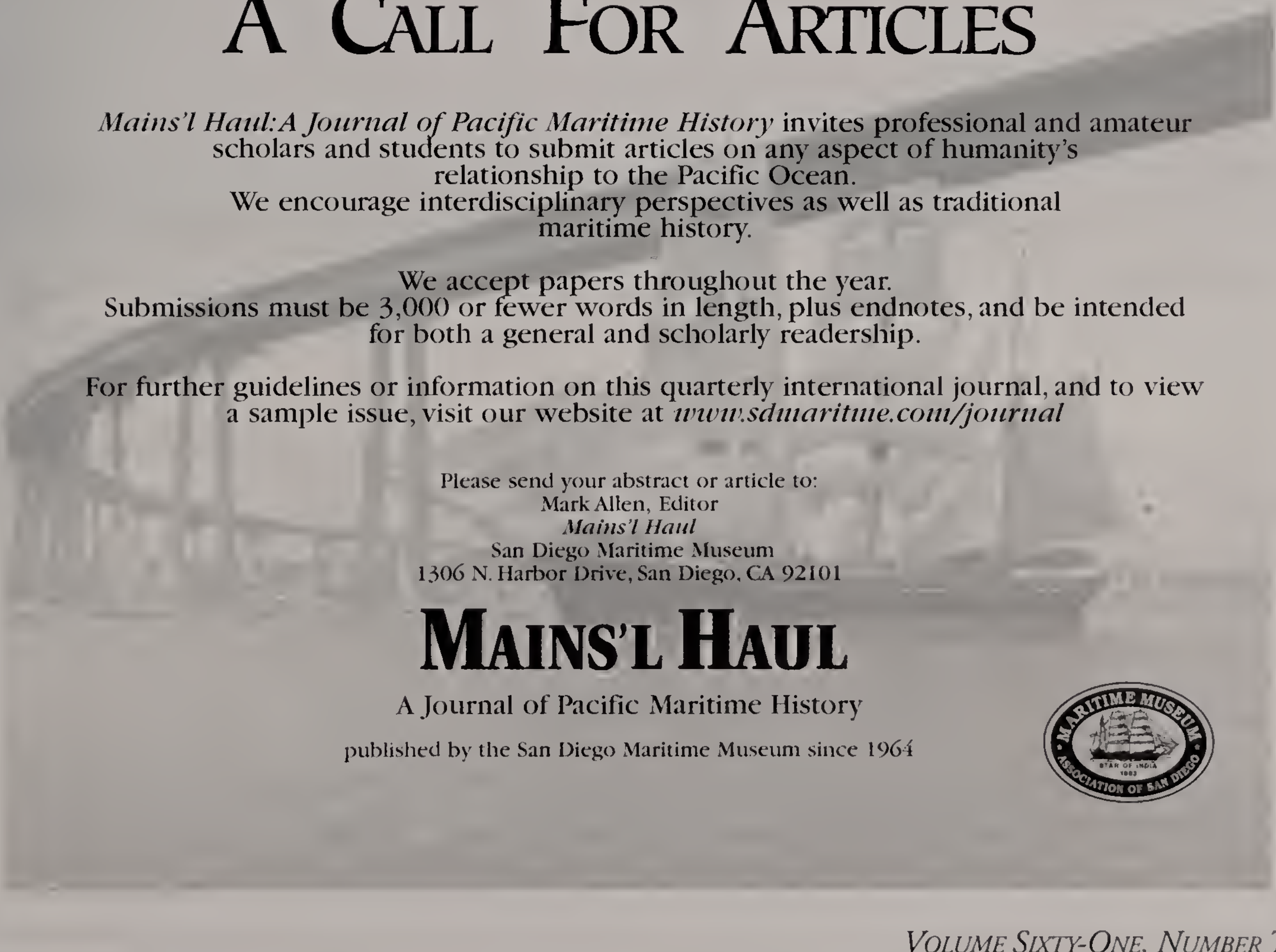

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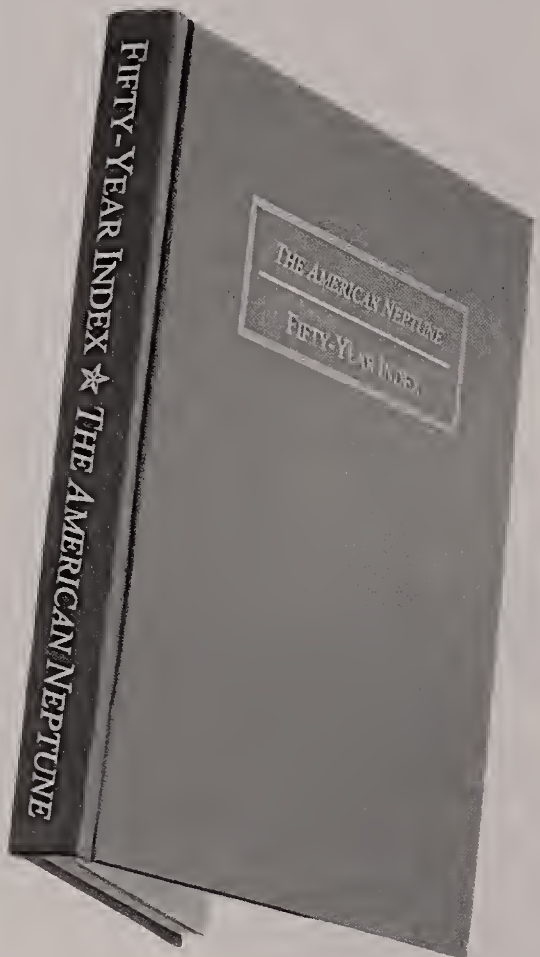

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